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THE STEAM AND THE TRAIN.

SUPPOSE, to-day, that we try to bring out our leading idea by means of a little illustration. Perhaps the best way to do it is by asking you a question.

What makes a railway train run a long distance on the level after the driver has shut off the steam but not applied the brakes? Of course, you know the fact; but can you give the true reason why? You cannot. It looks so simple, too. Maybe you are a bit vexed with me for assuming that you don't understand it. Why does an apple fall to the ground when you let it roll out of your hand? The great Sir Isaac Newton called it the attraction of gravitation. But what does that mean? It means nothing—just nothing at all. Mere "words, words, words," as Hamlet says. About one-tenth of so-called science is knowledge, possibly; the rest is talk.

In explanation of the continued running of the railway train after the driver has shut off the steam, the learned men say "inertia," "unexhausted impulse," "stored-up force," and so on. But these also are mere phrases. Behold they go not to the bottom of the mystery.

What then does Mrs. Griffiths mean by saying that on a certain occasion she had lost her energy? She states a fact, and an important one. Is energy the same thing as strength? Turn it over in your mind while I copy her letter.

"In October, 1894," she says, "I began to feel weak and low, not having my usual energy. My appetite was poor, and after eating I felt sick, and had weight and pain at my chest. I was in great pain, and was so weak that I could not do my housework. I took various kinds of medicine, but got no relief from anything. For four months I continued to suffer, when my brother told me that he had been cured of a similar complaint by Mother Seigel's Curative Syrup He brought me a bottle of this medicine, and when I had taken it a few days I began to mend. I could eat well, and the food gave me no pain, and I felt stronger. Since that time I have kept in good health. You can publish this statement as you like. (Signed) Dorothy Raine Griffiths, Brook End, Fazeley, near Tamworth November 24th, 1896."

No; energy is not quite the same thing as strength. The two words are often used as signifying the same thing; but, properly understood, energy is a disposition to put forth strength, to act, to work, to accomplish one's purposes and desires. Nevertheless, the foundation of energy is strength. You can't spend a shilling until you have it. Mere ambition amounts to nothing unless you can realise it. And so there we are. By harking back to the first sentence of this lady's letter you will find she puts these two points in their proper order; she lost first her strength and then her energy. And there is no ailment under the sun more certain to rob us of both than the one she suffered from—indigestion or dyspepsia For it strikes straight at the source and fountain of all strength, vigour, vitality--of everything that makes the human body differ from a clay image,

If there were a way to turn lead into gold in three or four hours, we should open our mouths wide in astonishment at it. But the digestion beats that as a champion bicyclist beats a man on crutches. It transforms bread and meat into bone and muscle, and fills these living temples of ours with power and grace and gladness. That's what the digestive process does, I say. Retard it and weakness follows, as fruit withers on a tree when you stop the sap from running up. Then comes a loss of energy, of course. The bank is short of funds and will cash no cheques.

A person may be naturally energetic, his work may be his play, he may be what the Americans call a "regular hustler"; but in the cold grasp of dyspepsia his strength leaks out and his energy dies away as the speed of the railway train does rod after rod, when the locomotive has ceased to pull.

And this dreadful disease—this weakening, depleting, lowering malady called dyspepsia—what a curse and a nuisance it is! It is worse than letting the red blood out of your veins with a lancet. It keeps women from working in the house and men in the shops. Thank Heaven for the power of Mother Seigel's Syrup to relieve and to cure it—the power that enables the poor world-weary dyspeptic to say what Mrs. Griffiths says—"I am now as well as ever."



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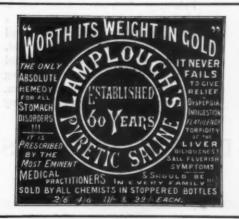


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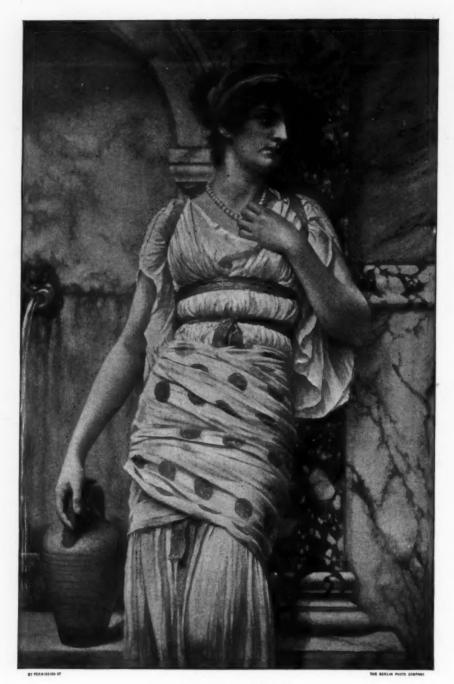
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AT THE FOUNTAIN. From the Picture by W. J. Godward.

THE SCHOOLMISTRESS OF HAVEN'S END.

BY ELLA EDERSHEIM OVERTON.



"OH COME, MISS! COME TO ONCET!"

CHAPTER XVI. -BREAD ON THE WATERS.

"I NEITHER can nor will give up the name of my informant, Mr. Rankes. And if you will not give me your promise neither to press me in the matter nor to act towards any person as though you suspected them of the theft, I cannot consider myself at liberty to point you to the place where your silver now is."

Mr. Rankes sat in his usual invalid chair, his little glittering eyes fixed fiercely on Joan. The brief statement which she had made to him of

the information that was in her possession had had a very different effect upon him from that which Joan had anticipated. He was far more angry than pleased. He was affronted that this mere slip of a girl who spoke to him should have come at a secret which neither his own ingenuity nor that of his paid employés had been able to unravel. He was furious that he was in her power, and that she chose to make conditions which robbed him of the delight of revenge for an injury over which he had long brooded. Harsh and repellent in manner, it was none the less true that Caleb

Rankes ardently desired popularity; and the loss of his silver, pointing as it did to connivance in those of his own household, had wounded him to the quick. He craved for the esteem and affection of those whom his unfortunate manner daily alienated. And the knowledge of his inability to secure what he most desired had served still further to sour and harden him. Lena had managed, after thirty years of misunderstanding, to pierce the rough, forbidding coating of her father's heart, and had learned something of its warmth and depth. His old mother had done a great deal to still further soften him, and to confirm the gentler influences now at work on the self-made man. But to be brought suddenly face to face with such a tale as Joan's was a rude shock to a man like Caleb Rankes. It wounded and insulted his aggressive independence and love of power, demonstrating as it did most clearly his helplessness to defend or preserve his own

Joan stood facing him, half-way down the long library, perfectly resolute and apparently perfectly unmoved. Even so keen an observer as Caleb Rankes failed to notice her quick, short breaths, and the unwonted fever of her cheeks. To him she seemed cool, self-possessed, determined-a minx who knew she had the whip-hand of him, and meant to retain it! And yet he could not but admire her bearing and courage; for he had tried bullying, and argument, and coaxing, and she remained inflexible.

"And what if I refuse to make any use of your information until you withdraw your condition?" the squire hazarded at length, and he

watched her closely.

Joan shrugged up her shoulders and spread out her small delicately gloved hands, palms downwards, with a gesture peculiarly her own, and which plainly signified that the responsibility of such a decision did not lie with herbarely concerned her. She dressed very well when she took any trouble about her toilette. And to-day she had chosen to take considerable trouble, and her fur-bordered garments of Lincoln green set off her warm tints and ruddy hair to the best advantage. The old squire suddenly saw her in the light of an uncommonly pretty girl. Heretofore he had been wont to regard her as the schoolmistress, as a daughter

of Jack Harding, but not as herself.
"Come here, my dear," he said; and his voice had changed so completely that Joan scarcely recognised it. Obediently she drew near his chair, and as she reached it, he stretched out one of his great gnarled hands and took

hers in it.

"You're a very pretty girl, Joan Harding," he said slowly. "And I believe you're a good girl too. I'm not surprised that my boy Arthur wants to make you his wife. Come! Shall it be peace between us? You shall do as you choose about the names of your burglars, and I will tell Arthur that he may come a-wooing."

Joan's head seemed spinning round and round in immensity. She could scarcely believe

she heard aright. But Caleb Rankes had her hand in a firm quiet grasp, and her eyes were drawn to his, although in her bewilderment and confusion she would have preferred for them any other destination. She could not speak, and she did not attempt to do so.

"Are you surprised?" the harsh, subdued nice went on. "It's nothing very wondervoice went on. If I were ten years younger I might have been tempted to try myself! But there! there! I thought you knew the boy was head over ears in love with you, and has been for months! Why, everyone else is aware of it. His sister Henrietta attacked him about it ever so long ago. And he's a nice, steady boy; not brilliant-but he'll make a good husband. He hasn't had the courage to speak, I suppose. He never could take a snub easily, and I daresay he thinks it is as well to avoid one. But if I may have your permission to tell him What now! the child is crying! What on earth are you crying for? Ring the bell! Send for Lena! Send for Pearson! I can't be left alone with a weeping female!"

But Joan had fallen in a limp little heap on a couch; and, seeing that she was not in the least likely to carry out his commands, Mr. Rankes, with two or three violent revolutions of the wheels of his chair, made for the library door Before he had reached it, however, Joan had recovered herself, and threw herself in his way.
"Oh stay! stay! I did not mean to be silly,"

she pleaded. "Indeed I won't cry any more! But you-you frightened me! I had never thought of such a thing! Captain Rankes has always been so kind to me—such a good friend!"

Caleb Rankes smiled grimly.

"I don't see what I have said to frighten you," he began crossly; and then softened again as the sweet child-face met his glance in imploring deprecation of his rough tones. "I suppose you mean to marry some day?" he suggested more quietly.

Six months ago Joan would have met the question with clear eyes and unruffled brow. Now, to her own chagrin, she felt herself blushing deeply, and was conscious of fencing

as she answered:

"Women don't marry; they are married, sir!"

Caleb Rankes laughed shortly, but he was not going to be put off. "Has Arthur any chance?" he demanded, and there was no evading the question. Joan's native frankness stood her in good stead.

"I have never thought of your son in such a light," she said, bringing grave sincere eyes to And then, seeing him unmeet the squire's. satisfied, she added sorrowfully: "And I don't think I want to."

"He'll be a rich man, and your father has married again. You're disinterested, girl," he

said gruffly.

Joan flushed, but did not answer. The conversation was to her extremely painful. She had never supposed that it would touch such a current. She heartily wished herself safely out

of the library, but scarcely saw yet an opportunity for farewell without undue curtness. The squire began to speak again.
"Sit down!" he said; "I've got something

to tell you."

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Joan mechanically obeyed.
"When I was quite a young fellow," he resumed after a few moments' interval, "your father did me a service. I saw my way to an invention-nothing that you would understand -but I had no capital to work it. I couldn't settle down to my ordinary work-I kept worrying and fretting on over the thing that was in my head. One day, out of idleness, I undertook to go out beating with the keepers. There Your father was of was a shooting-party on. the party. I liked his face. He was very handsome, and there was something genial, generous, débonnaire about him. I asked his name, for he was a stranger in our parts, and I then and there made up my mind that I would ask him, stranger to me as he was, for the loan of a couple of hundred pounds. I want you to understand, Miss Harding, that I wasn't a gentleman and didn't look like one. I believe I wore corduroys and a second-hand coat. after lunch I got your father alone and I told him my story. He looked me straight in the eye, and I shan't forget his glance. He has a clear, grey eye, with a large black iris to it, has your father—it's a clean, wholesome eye. 'You're a rum chap,' he said. 'But I believe you and your tale. You shall have what you want. And if you can't pay it back at the end of two years, write and tell me so.' I went back with him to the house where he was staying, and he wrote me out a cheque. That was the beginning of my fortune."

He paused, and Joan turned on him her beaming face. She was thrilled and delighted by this story of her father's good-heartedness and generosity. Somehow it seemed to bring back warm about her heart memories of the old home with its associations and ties-associations and ties which of late had sat but weakly on her. Mr. Rankes began to speak

"You come of a good stock, Joan Harding," he was saying; "and I should have been proud for my son to have had you for a wife. have never thought it likely that you should care for him; nor, I am convinced, has the poor So we'll let that alone. But for boy himself. the sake of the old days, and the service your father did for me then, I'm ready to give you any promise that you may exact which will insure the safety of these blessed burglars of yours. So state your wishes."

It was very far from Joan to suppose that this unexpected acquiescence of the squire in her wishes should have any connection with the influence that lay in a pair of sparkling, redbrown eyes, or his sudden awakening to the charm of a soft, demure face, and warm, cloudy hair. Nor did it strike her that his perverted pride was persuading both of them that he was granting a favour, where in reality

he was accepting one. Inwardly she praised her father for his good deeds in the past. gently and very heartily she thanked the squire for his promise of protection for her unnamed protégé, and agreed to accompany a couple of trusty men the next day to the spot where the silver lay hidden. But, as she parted from old Mr. Rankes, she could not but realise that she now was on a very different footing with him from that on which she had been when their interview commenced. And her eyes rested on him quite affectionately as they shook hands in parting.

CHAPTER XVII.—"GRAPES OF THORNS AND FIGS OF THISTLES."

T was the middle of December; less than a week to the Christmas holidays, and Joan was going home at last. She sat now alone in her little parlour. Outside the rain was coming down steadily. It had been a long, wet autumn after the first, early, sharp frost, and all Haven's End was sodden with the almost uninterrupted rainfall. The ploughed fields showed miniature canals between each ridge; the numerous ponds were full to overflowing. The air was so laden with moisture that it was heavy to the lungs to breathe. There had been a good deal of sickness about, and old Master Prior had been found dead in his bed one morning. Joan mourned for the old man as for a friend, and his death seemed to cast an additional gloom over the place for her.

Joan's room was very snug and cosy. A warm fire blazed on the hearth, and her little feet encased in thin slippers (Joan was very particular as to how she was shod) were stretched to the blaze. She lay back in an easy-chair, her hands idly crossed on her lap, her eyes closed. Her attitude was one of utter weariness and dejection. Charlie had gone off to bed two hours before, and her travelling clock had just struck ten, but still the girl made no movement. She was passing in review the principal events of her two years' sojourn at Haven's End, and her heart was very sore. It was two years since she had seen her home. She had practically lost it, giving of her best for others all through that time. And what advantaged it her or them?

Joan was tired—utterly tired out. wise friend been near her, she would have been ordered off to bed, and bidden postpone her retrospect until such time as her body felt fresh and her head ceased aching. But there was no one at hand to proffer kindly advice; and Joan sat on thinking and thinking, while at times hot tears forced themselves singly through her closed eyelids, and coursed slowly down her cheeks.

Mentally she passed in review, one after another, the familiar village-figures. What difference had she wrought in them? Each was as he or she had been. Old Master Prior was dead; his son Job, whom at one time she had thought to win, had, since his father's funeral, constantly given way to drink. He had

managed lately to evade and avoid her, but rumours of his brawls and his violence at home had been brought to Joan's ears. Her prayers and her struggles for him seemed unavailing.

Of what profit had they been?

Miss White she knew to be her undeclared enemy. She thought of Mrs. Potten. She was dirty, feckless, and uncertain as of yore. Joan's small attempts to inspire her with a love of order, decency, and cleanliness had only aroused her animosity, and poor Joan felt the keen

CHARLIE HAD BEEN CAUGHT STEALING APPLES.

dislike which the woman scarcely attempted to conceal. Sukey Prior, again, tolerated her interference merely in so far as it involved the material advantages of gifts of clothing and food. Joan could mark in her home no improvement whatever. She sighed again profoundly as she dismissed each fresh witness from her mental

Widow Day had always been respectable, and always would be so. But Joan could trace no abatement of the Pharisaical dignity which held her aloof from her neighbours, and in her present mood she even began to doubt whether the woman had not perhaps been wise in keeping herself out of village concerns.

Certainly her own attempts at bettering these shone up to her at this moment as signal failures. She had restored to the old squire his long-lost silver (which, she now told herself, he could very well have done without), and she had made Charlie Curtis a happy home. She could think of no other fruits of her "mission." And Charlie had been caught stealing apples only six weeks previously, although he had the entire run of her own little orchard! Surely he had not yet grasped even the elements of morality. Another failure.

Joan stirred, and then again collapsed. Why

had she so failed?

She had been so full of hope and courage and faith in her mission. She had been so secure of the victory of influence. Did the children love her? Some of them-perhaps; others, her sweetmeats! But that very day one of the big

boys, who had left school some few months, had met her as he tramped by his horse's head, and had ignored her bright greeting. Joan had not caught his sheepish flush, and was in no mood to interpret the rudeness as caused by shyness. She had neither won him nor his fellows, she told herself. Here was another of her failures. "Grapes of thorns and

figs of thistles!" The doctor's words came back to her. After all, had she not engaged in a hopeless task, espoused a cause already lost? Could high ideals and a lofty standard of conduct be expected from these soil-sodden peasants? Were they capable of, rather than fit for, com-munion with God? She felt herself shaken by the blackness of the hideous doubt of God's omnipresence in His creation.

Or did the fault lie solely with her? Had she been too presumptuous, too sure? Had she depended too much on herself? Even her morbid sensitiveness could not here wholly condemn her. She had prayed and fasted, and fought and struggled in God's name. Why

had He then forsaken her?

It was Joan's dark hour, and out of some of the sweetest of her characteristics the devil forged weapons wherewith to attack her. Her very humility forbade her from estimating the value of what she had done. It would have been impossible for her to believe that the change in Lena had been due to her friendship and influence, and that the squire, indirectly through her agency, was a new man. She could not sum up the hearts she had warmed and cheered, the feeble hands that she had strengthened, the lamps she had lighted in dark places. She saw herself only in her own sight as a miserable failure, and attributed to her weakness, her inconsistency and unfitness, the loss of her cause.

The tears were running down her cheeks fast now. She got up out of her chair and flung herself on her knees beside it. Her face lay buried in her hands, and her whole body shook and heaved with the violence of her grief.

"If only I had one soul to bring Thee, Lord! One soul as the fruit of my work! One lost soul brought back to the safe shelter of Thy fold! One erring one restored! But I am not fit—I am not fit! Lord! I have given Thee my weak, useless, wretched self! Is it too mean an offering for Thee? Hast Thou no need of it? May not one life, one lost, miserable life out of the many be won with it? See! I offer myself to Thee! I yield my youth, my health, my strength, my heart's cravings to Thy service! Kind, gracious Saviour, condescend to my poor gift! Take it! Use it for Thine honour!"

She had lifted her face, pale and wan, the eyes still tightly closed. Her upstretched hands seemed lifting her offering on high. Her tears had ceased, and she knelt still and

quivering.

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A sharp rattle of gravel-stones on the window panes, and a hurried, impatient knocking, startled her abruptly. She leaped to her feet and ran to the door. As she unfastened it, it was forced back on her, partly by the rough wind and partly by a child's arm.

A little white frightened face gazed up at her out of the darkness. "Oh come, miss! Come to oncet! As fast as ever you can! Father's mad drunk and he's killing mother! We shall

be too late!"

The child's voice had broken into sobs, and he was already running down the garden path. In this little miserable bundle of fear and wretchedness Joan barely recognised the usually bold and defiant Sammy Prior. Forgetful of her house door, her thin shoes, and insufficient clothing, she fled down the path after the messenger; her one thought, not her own helplessness, but to arrive at the Priors' house

in time to defend the helpless.

Up the crazy steps of the building she darted after Sammy. The Priors' cottage was one of those whose quaint architecture of tarred timbers and bulging plaster had attracted her on her first arrival at Haven's End. Already a woman's voice, raised in shrill screams and cries for mercy, reached her ears. Joan wondered dully why none of the neighbours had come to her rescue. In another instant the house door was thrown open, and the scene which met her eyes was stamped on her brain until her

dying day.

The kitchen seemed clean and tidy. firelight danced on a long copper warming-pan that must have been recently polished. stinctively the contrast of colour of the Turkeyred frilling on the high mantel-board and the blue of the crockery on the dresser struck Joan. In that instant indeed the picture in its smallest detail impressed itself on her mind, She noted the buttonhook that hung by a nail one side the chimney-piece, and the crack that ran down the jug nearest her on the dresser. Facing her, with his back to the fire, stood Job Prior. He was a magnificent figure of a man, the finestlooking fellow in the parish. Tall and straight and lithe, he carried his head, thickly covered with yellow-gold locks, like a Viking. A thick, curling, yellow beard hid the loose lips

and weak chin. His eyes shone intensely blue

as turquoises.

Between him and the table, with her back to Joan, crouched the untidy figure of Sukey Prior. Her husband had her by the hair of her head, but the woman clung, screaming, with one hand to his arm and with the other to the solid round table. On this table stood a lamp. Joan had taken in its cracked chimney and its receiver of cheap green glass with the rest of the picture. Evidently Prior was trying to reach it, and the woman hampered his movements. As Joan appeared he had kicked the wretched creature on one side, and Sammy whispered to the teacher—

"He've a-swore to set fire to 'er wi' the

lamp! That's wot 'e's after."

Joan dashed forward to snatch the lamp out of danger. But the man was too quick for her. Sukey must have heard the arrivals, and, turning her body to see who it was that had come, gave Job a momentary advantage. Joan caught the glare of his eyes, and drunken flush on his face, his heavy breath and half-articulate oaths. Then, before she had time to realise what was happening, she felt the crash and sting of breaking glass upon her forehead, and an intolerable anguish as of molten fire ran down her face. With a short gasping cry she fell forward on her face and lay as though dead.

CHAPTER XVIII. - FAITH'S TRIUMPH AND LOVE'S REWARD.

OUTSIDE dark night, and a rushing, relentless wind; inside two eager, straining watchers, and the still form of a girl. Joan lay on the floor of her own sitting-room, on a hastily improvised bed. She had been carried there immediately after the disaster by Mrs. Gladding's orders, and while she was still unconscious. Once, as they lifted her, she had stirred and moaned, but this was the only sign of life she had yet given. And Dr. Drage, who knelt beside her, welcomed this involuntary lull in the flood of consciousness imposed by Mother Nature. He whispered to Mrs. Gladding that nothing must yet be done to rouse the girl.

None knew who had fetched the doctor. It seemed as if he had appeared on the scene by a miracle. Some spoke of a strange gentleman who had been passing through the village on horseback, and who had volunteered to act as messenger; but the truth of this report was not

yet substantiated.

Mrs. Gladding had drawn off Joan's soaking shoes and stockings, and hot bottles and warm flannels were applied to her cold limbs. Her face was hidden from view in the oilsoaked rags and dressings which almost entirely covered it. Her glorious hair had been loosened from its knot for the ease of her head, and lay about her in billowing masses.

A little sigh escaped her, and the watchers exchanged glances. She was regaining consciousness. Dr. Drage put a strong restorative to her lips, and Joan obediently drank.

There was profound silence in the room until a small, weak voice spoke.

"I cannot see," it said, very softly.

A shudder passed through the doctor, and a look of infinite pity stole over his face.

"Your eyes are covered over, dear," he said most gently. "Do not try to open them."

No one appeared to remark the term of endearment, least of all the speaker. The pathos of that figure, stricken down so suddenly and so cruelly, seemed more than sufficient justification for it. Mrs. Gladding bent over Joan, and asked if she were in pain. The girl could not trust herself to speak. She lifted one hand slowly and let it drop again, to signify the intensity of her suffering. The doctor's voice sounded in

"Thank God for that! It is a hopeful sign. Let that give you courage to bear the agony.

Silence reigned again in the room, and the minutes passed slowly.

At last Joan spoke again.

"Where is Job Prior?" she said. want to see him!"

Mrs. Gladding could with difficulty be restrained by the doctor.

"Won't you wait till to-morrow?" he sug-

"No, no!" Joan cried feverishly.

morrow may be too late! I must see him tonight-at once!"

'It would be fatal to contradict or excite her," Dr. Drage told Mrs. Gladding at the door, as he made haste to depart on Joan's errand.

Outside he was met and stopped by a small resolute hand, and Charlie's face peered into his. The child had been summoned from bed to hold the doctor's horse. But Dr. Drage scarcely recognised the white, drawn countenance of the boy, with the murderous look of loosened demons in his eyes.

"You may come with me," the child's voice hissed into his ear. "I am going to kill him! You love her too . . . I see you do. And now I'll do for Jobie Prior as he's done for her!

You may come with me."

now.

Dr. Drage was obliged to wait to soothe and pacify the excited boy. He assured him that there was little danger for Joan's life, and that any injury done to Job Prior would be far more likely to hurt the "governess" than him. Having exacted a promise from poor Charlie to behave quietly and give no trouble, he left him in tears, and hastened on to Prior's The door was unfastened, and he cottage. opened it and walked into the house.

The fire was almost out, and a thin, sputtering candle alone lighted the room. Prior sat by the table, his head, face downwards, lying on His wife, white and staring, sat his arms. dumbly watching him. A dark stain on the floor and some broken pieces of glass marked the spot where the lamp had fallen. At the sound of the unfastening door Mrs. Prior screamed, and Job raised a haggard face with wild, blood-shot eyes. He was perfectly sober

"I thought as 'ow 'twas the p'liceman, sir," Sukey explained tremulously, as she recognised "That's wot I's waiting up for." the doctor.

Dr. Drage ignored her, and, in spite of the fierce rage in his heart, a pang of pity smote him for the wretched man, whose eyes hung on his face, speaking a question his lips dared not

"Miss Harding is conscious and has asked for you," he said, his stern face set and unbend-ing. "You must come with me."

For all answer, Job let his head drop again on his arms, and made no further movement. His wife took the opportunity to slip past him out of the room and up to bed. Dr. Drage marked her departure with relief not unmixed with disgust at such insouciance. But here he wronged Sukey, not taking into account her weak physique, and that the events of the evening had been trying for her, if worse for Joan.

Dr. Drage came close up to Prior, and began speaking to him. His words were few and trenchant, and they struck home. With an effort the man pulled himself together and, rising, passed out of the house with the doctor.

Joan heard them coming, and when they had entered her sitting-room she held out her

"Take my hand, Job," came the soft, weak voice, as though from very far away. "I want to speak to you. May we be alone a few minutes, Dr. Drage?"

Though he dreaded the excitement for her, he dared not deny her. Together with Mrs. Gladding he left the little parlour, and Job Prior kneeling beside the girl with his hand in

And then Joan told him of her prayer, and how that she believed that this was God's answer to it.

"For, Job," she said simply, "I know that you will never drink too much again. And if I am to die, then God will have granted me what I earnestly asked Him for-a life, a soul, for my life. And if I live and my sight is gone, then He has still left me years in which I may glorify Him. It is His Hand that has struck me, Job—not yours. And God never strikes in anger—only in love. This has fallen on you and me to draw us nearer to Him. . . . Let us pray."

Slowly and heavily the great tears fell from Job Prior's eyes and fell on the little, cold hand that held his. And when Joan had finished praying he rose and lifted one hand

solemnly.

Joan trembled to hear the curse that he called down upon his head should he ever touch "the drink" again.

When he was gone and Mrs. Gladding and the doctor had returned to her, she was once more mercifully unconscious.

On the days and nights of sickening pain that followed it were bootless to dwell. soon became apparent that Joan's healthy

system would rally from the shock, and her injuries, though terribly painful, touched no vital part. She bore her sufferings as they only can endure to whom life's ills are neither wanton nor meaningless. She was devotedly watched by Mrs. Gladding and a trained nurse. Her chief anxiety was to keep the bad news from her family until Christmas was over, and for this purpose Lena invented a hypocritical little note to Mr. Harding, pleading an "indis-position" which would prevent Joan from travelling so far for the present.

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"They must not know yet," the sick girl whispered to her friend. "I don't want them to know-until I have learned all."

For the blackness of darkness hovered over Joan, and, though the subject had not been broached since her first weak cry of "I cannot see," the terror of blindness haunted her day and night: and Dr. Drage knew it, yet could venture no comfort.

She had asked for the wrappings to be taken off her eyes, and had been gently denied.

"We must not hurry," Dr. Drage had said, in that new, pitiful voice of his. "You must give the sight time to rally.

So she lay patiently in darkness, while the schoolhouse door was thronged by an anxious multitude, to whom Charlie, subdued but important, gave such facts as he thought fitted the status of each.

"I ain't a goin' to tell Mother Potten everythink, nor Muss' Black neither," he assured Mrs. Gladding. "Why, that old woman wouldn't never give I no matches when we runned out, her was that spiteful, 'cause the guv'ness couldn' stomach her stinkin' bacon, what isn't fit for the pegs theirsens! And as for Muss' Black, sher'd better far stop at home and mind that there limb o' hers, Jimmie. My hands fair itch to have the thrashin' o' him, a hollerin' the other night on that plaguey tin whistle o' his, fit to wake the dead, when Miss

Joan was a tryin' to sleep!' Mrs. Potten and Mrs. Black were by no means the only callers who came to inquire for "the governess." Not only were there daily messages from the Rectory and visits from the Hall, but Joan, prostrate, began to learn that she had been wrong in her estimate of the poor folk of Haven's End, and that, though she might not have yet succeeded in reforming their lives, she had at least won a warm place in their The children swarmed about her door, but received scant courtesy at the hands of The baker's wife, whose hand was Charlie. against every man, and who was popularly supposed to be the "nearest" character in the parish, took to manufacturing choice rolls, which she sent up daily to the schoolhouse in the hope of tempting the invalid, indignantly refusing to render any corresponding bill. Mrs. Potten contributed a few delicate rashers of the despised bacon, and Joan, in her gratitude and contrition, went so far as to have them cooked, but broke down when they were served up. Widow Day kept her in set nose-

gays of flowers, stifled indeed by compression, but breathing the sweetness of kindness and love. Job Prior came to see her every evening after work, saying little but sighing often and deeply. Joan liked his visits and his silences. She had always a word of courage and comfort for him. Even Miss White dissolved in tears on the doorstep, and could with difficulty be dissuaded from forcing an entrance by Charlie.

So Christmastide passed. Lena was constantly with Joan, and the two seemed drawn nearer together by the very weakness of her who had been wont to be the leader.

"Joan," said Lena, sitting with her friend one evening, "do you know I believe this accident of yours has done more for the place than all your two years of work!"
"How do you mean?" Joan asked.

"It seems to have drawn out the most extraordinary, the most unexpected feelings in every-You would not have known the Rector when first he heard of it. He was quite broken down. I never liked him so well. And papa sent for him and desired that you should be prayed for morning and evening in church. Fancy papa thinking of such a thing! And in church, when your name came, there was quite a sound of sobbing through the building. or two children cried out loud, and Mr. Bolero himself sniffed, though he was very impressive. The whole village seems going about on tip-toe, as though a public calamity had fallen on them. And so it has! But I should not have given them credit for realising it."

"I, too, have wronged them," said Joan in a muffled voice. "May God forgive my want of faith in Him and love for them!"

The day came at last when Dr. Drage thought that Joan might travel to London to consult a famous oculist. From himself he did not conceal that in all probability Joan Harding's beautiful eyes were damaged for life. And as his love for the heroic girl grew stronger every day that he saw her and had fresh opportunities for marking the nobility and sweetness of her character, his heart grew heavier within He dared not offer her a love which she would believe to be born of pity; and yet for him there was no other thing in the world to be desired but Joan Harding.

Lena and Dr. Drage had both wished to accompany Joan to the oculist, but she resolutely refused to have any other companion than Job Prior.

"I mean to know the truth," she said to the "And I will have no one near who doctor. can conceal it from me. When you have changed my dressings and uncovered my eyes everything has seemed black before me with shooting glimmers of painful brightness. I think I am blind; but I must learn the truth. Job, too, has the first right to know if there is any hope, and it will help me to bear up if I have him to think of and encourage. Don't deny me. My mind is set on this thing."

Dr. Drage understood better than Joan the helplessness of a countryman in London, but

he did not contradict the girl.

"We must not oppose her," he said to Lena privately. "She has been so accustomed to live for others and give herself for others, that it has become second nature, and to thwart her in her present wish would be no real kindness. I believe that, as she says, Job will be the best companion for her. But I shall travel by the same train and make all arrangements for them without her knowing it. And I will send you a telegram directly we have the oculist's verdict."

Lena thanked him gratefully. In these days of chastening, she had accepted the offer of the Rector's hand, her former smart independence having quite deserted her. Involuntarily Joan was therefore responsible for this engagement; for Mr. Bolero had chosen his opportunity cunningly, when Lena was softened and broken down with grief for her friend's disaster, and the Rector's genuine sympathy had comforted her. The marriage, however, promised to be

in all ways a happy one.

The squire's carriage drove Joan to the station, Lena accompanying and seeing her off. It was strange to see the delicate, highly bred girl, her face and head swathed in a soft wrapper, holding Job Prior's arm as he guided her to the compartment in which they were to travel. Job, in Sunday broadcloth and creaking boots, was not so fine a figure as in his linen coat and corduroys. But his face wore a new gravity and responsibility, and there was a steadfast light shining in the brilliant blue eyes. He leaned out of the window and breathed a sigh of relief as the train went off, and he caught Dr. Drage's signal from the adjoining carriage.

The hours seemed very long to Lena until the telegram arrived; and when it did come she shook and trembled so that the Rector had to open it for her. He supported her with his

arm while he read aloud:

"Good hope of ultimate recovery with prolonged rest."

"You seem very gay this morning, young lady. Pray, have you had good news?" Dr. Drage cried cheerfully, as he entered Joan's room some three weeks after the events recorded

Joan was established in Lady Maria Swift's town house, which her mother's old friend had put at her disposal immediately on learning that the oculist desired her to be within easy reach of him for the next six or eight weeks. Mrs. Gladding remained with her, a faithful and congenial companion. She read and despatched Joan's correspondence, and did all in her power to while away the tedium of the long dark hours. But Joan was never impatient. The room where she sat, if darkened, was sweet with the smell of early lilies-of-the-valley, while pots of bright tulips and tall pure arums stood about. Joan, her eyes bandaged, lay back in a luxurious chair, her hands busy with some coarse

knitting. She flushed, and her face rippled into smiles as the doctor's voice sounded on her ears.

"This is delightful!" she cried, eagerly holding out her hand. "I have so much good news to tell you that I don't know where to begin! Sit down somewhere near me, where I shall be able to feel how you are looking."

He immediately drew a small chair close up to the girl, and bent his eyes on her with a look which her bandages alone could justify.

"First of all . . my stepmother is not coming down, because . . Lettice has just become engaged, and so, of course, she can't possibly leave home! And who do you think it is to?" she ran on, too excited to be coherent.

"Why, to Walter Grimshaw, of course, you silly child," he laughed. "It was a foregone conclusion, if only you kept out of the way

long enough!"

Joan bent her head towards him.

"Indeed," she said, with a charming seriousness, "I believe he always liked her best—only when we were all of us young together, I was the most grown-up of the two, and so it seemed grander to fancy himself in love with me!"

They both laughed prodigiously over this ingenious explanation of the difficulty, and then

the doctor begged for further news.

"I have had a letter from Lena," Joan said, sobering down. "And she tells me that you have told the squire that it was Mr. Shaw who rode off for you on the night of my accident. It seems that you have said that if it had not been for Mr. Shaw's promptness, and the immediate remedies you were able to apply, things might have gone much more badly with me. Is this true?"

"Quite true," he assented, as she waited for

his reply.

"The squire is so pleased with Mr. Shaw's readiness and quickness, that he has agreed to a reconciliation. It seems that things were at a desperate pass with Henrietta and him. Poor Henrietta is quite a wreck, Lena says. They were literally without funds, and had pawned all her jewels. Mr. Shaw came over to Haven's End in the hope of waylaying Lena, and winning her over as a go-between. He had failed to see anyone, and was just preparing to ride back to a village where they were in wretched lodgings, when . . all that happened, and he galloped off at once and sent you to the rescue. Mr. Rankes has now volunteered to make Henrietta an allowance, and to find some employment for Mr. Shaw, who has sold out of the army to pay some of his more pressing debts. So here is fresh good out of evil, and I am so happy!"

"Indeed, your loss seems to have been most people's gain," he agreed. But something in his voice caught Joan's sensitive ear, and she turned to him, in her sightlessness holding out

her hands towards him.

"What is it?" she begged.

Then he flung himself on his knees beside

her, and catching both her hands pressed them

against his heart and lips.

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"Can't you make me happy, too, Joan?" he whispered passionately. "Have you a place for everyone in your heart except me? Joan, dear Joan, I love you so! Give me a little corner in your heart, or I die of cold!"

Her head fell forward on his shoulder.

"All my heart is yours, Dear," she murmured there.

A little later she was very mournful.

"Have you thought what an ugly wife you will have, poor Paul?" she complained. "Weak eyes, goggle-glasses, and a face seamed with scars. Really I dare not let you sacrifice your-self to such a degree!"

He had his arms round her, but he let her

go, and with deft, tender hands unwound her bandages, and passed his fingers gently over her cheeks and brow.

"Do you know," he said exultantly, "that our oculist told me this morning that you were making a splendid recovery, and that, in time, your eyes will be as good as ever? And, dear, I shall have your beauty as well as you. For there will be no scars on my wife's cheeks, and only one, just here where I kiss, on her forehead, and that will be hidden by this little, wild curl, which has driven me distracted ever since I first saw it."

She let her smiling face lean against him. "And we won't forget Charlie, who first brought us together?" she said.

"Nothing is too good for him," the doctor answered enthusiastically. "He shall be our page, footman, butler!"

THE KING AND THE ROYAL LEECH.

AN EPISODE IN RECENT KOREAN COURT HISTORY.

THE war between Japan and China, though by no means at an end in January 1895, had rolled away from the coasts of Korea, and the erstwhile "Hermit Kingdom" had received from the conqueror the perilous gift of nominal independence. That brilliant and successful Empire, however, victorious by land and sea, was resolved to reform Korea on lines laid down by herself; and the initial feature of her programme was that the King should proceed in state, with the dignitaries of the Empire, to the altar of the "Spirits of the Land," the great ancestral altar of his dynasty, in a lonely pinewood below Puksan, and there in the presence of the spirits of his royal ancestors should solemnly renounce the suzerainty of China, which had bound his dynasty for five centuries, and that at the same time and place he should take an oath binding himself to carry out fourteen measures of reform brought forward by the Japanese advisers, headed by Count Inouye, the Japanese special envoy.

It was on December 8, 1894, that the King consented to take what is known as "the oath of reform," but on various pretexts he contrived to delay the ceremony for a whole month, and on one occasion, when the royal procession had actually been formed, he refused to enter his chair, saying that he had had a dream in which the spirit of the mighty founder of his dynasty stood beside him, and forbade him " to swear before him to a new thing." A far more serious and prolonged excuse was the exaggeration of a trivial ailment—a rash on the face caused by the use of a fan newly

lacquered with the juice of the lacquer tree (Rhus vernicifera), which affects some skins very injuriously.

To give importance to his Majesty's indisposition numerous statements concerning it appeared in the "Official Gazette." The court has an imposing official entourage of physicians, but it transpired that the King was secretly consulting Dr. Avison, an American medical missionary, and the papers which follow, translated from the "Gazette" by Mr. Wilkinson, the acting British Consul at Chemulpo, give some idea of the shiftiness of an Oriental monarch and his servants. It must be admitted, however, that the unwise abruptness of the Japanese in depriving the King of twothirds of the palace attendants, leaving the vast pile of buildings to solitude and ancestral spirits, accounted for the nervous depression and fits of weeping from which the Sovereign was undoubtedly suffering, in addition to the insignificant face rash. The extracts from the "Gazette" which follow are selected from a number which extended over four weeks.

The Royal Leech memorialises the throne, December 24. "Yesterday he humbly learned that his Majesty's symptoms were the same as on the previous night. He cannot conceal the extent of his burning anxiety, the Sacred Person no stronger. He is not ignorant that potions are constantly offered to his Majesty from the palace, but both his inclination and duty impel him to bring the physicians to feel his Majesty's pulse, and to inquire heedfully into his condition, and after consultation administer physic.

He fears that this should not be delayed. May his Majesty indeed be pleased to consent. With a million obeisances."

Royal rescript in reply: "It is noted. The symptoms are slightly alleviated, yet upon our



HIS MAJESTY THE EMPEROR OF KOREA (DAI HAN).

countenance and body is still an inflamed eruption. In the palace are many means of healing. There is no need to enter and feel our pulse."

The Royal Leech memorialises, December 26. "When a son is attending on his parents' sickness he feels their pulse without intermission, and makes a point of tasting their medicine. A minister who waits on his Sovereign is in like How much more are memorialists who are charged with the maintenance of his Majesty's health! Yet at the very time when the Sacred Person is indisposed, and symptoms of sickness are only too apparent, they meet continually with refusal to diagnose the illness. It is true that treatment is conducted within the palace, but Memorialists never cease to lament that they may not taste the medica-The Memorialists are not to be un-They needs must fulfil their office, but the Sacred Person is too benevolent, and they

fear that he should not be thus careless of himself. Yesterday they learned that the inflammation of the eyes and the bodily irritation showed no change.

"They are deeply despondent, and their feverish anxiety grows higher and higher. During the night was there no improvement in the symptoms? They humbly pray that regard may be had to their poor fidelity, and that permission be granted them to enter and make comparison. With a million humble prayers, etc."

Royal rescript in reply: "It is noted."

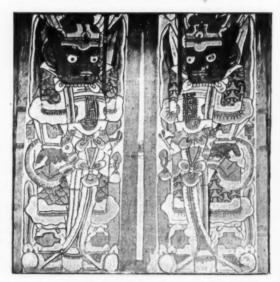
The King having turned a deaf ear to the pathetic pleadings of the Memorialists, who, of course, were well aware that Dr. Avison was in attendance, was next approached by a more

important personage.

"Memorial of the Euihoa Prince, Director-General of the College of Palace Physicians. He has respectfully listened to the reports of the physicians, who to-day came in to feel the Royal pulse. That he learns is steadier, but the inflammation is still pressing, and the irritation which has besides supervened is delaying its improvement. It is considered that the treatment should be one packet duly infused of extra-flavoured "wind-dissipating powder;" for external application should be a fomentation of cow bezoar.

"Memorialists are greatly distressed, and their feverish anxiety is doubled. They have humbly tasted the medicine, nor will they venture to return to their homes; but the college desires

from to-day to go on duty in a body.'



FIGURES ON ENTRANCE DOOR OF KYENG-POK PALACE.

Royal rescript: "The potion has been prepared. They are excused from attending in a body."

¹ In several Oriental countries the winds have to answer for many of "the ills which flesh is heir to." Thus rheumatism is "wind in the bones"; headache, "wind in the head," etc.

Further memorial: "Although they are not suffered to attend in a body, yet their feelings will not allow them to return home. They venture to propose to take turns on duty."

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for n is Royal rescript: "They need not take turns

Memorial of the Royal Leech, Decem-"He yesterday learned with humble respect that the inflammation was still severe, and the irritation excessive. He accordingly spent the night in perturbation, his five internal organs inflamed with anxiety. Yet to his request so frequently urged to feel the Royal pulse, his Majesty's voice is still inattentive. The fidelity of the Royal Leech and his colleagues cannot be exhausted-their humble affection for the Sacred Person admits of no Internal dosing and external treatment is a matter for extreme care. It is proper that physicians should be consulted, who, after comparing notes, might prescribe medicine. He now ventures, despite of its rashness, to again raise his pipe, humbly entreating that his Majesty be pleased to summon him."

Royal rescript: "It is noted. The surface redness of our face is rapidly getting better, but the feeling of inflammation in both our eyes and the severe irritation of our body is the same as yesterday—moreover, another symptom has supervened. Potions are being taken internally, and externally fomentations. There is the best of treatment in the palace. He need not come in to feel our pulse."

Verbal memorial from the Royal Leech, December 29. "He yesterday morning proceeded to the Presence, where he reverently examined into the Sacred condition, and made a minute study of the various symptoms. The

inflammation of the eyes and the irritation of the body showed no signs of improvement. The medicaments continually exhibited are not uniformly successful. Is it a want of thoroughness in the expression of his affection for his Sun (the King) that still delays the congratulations on recovery? Memorialists' tress increases with time, and right prinenjoins that they should not leave the college except from time to time to enter and feel his Majesty's pulse, compare the symptoms and prescribe the Thus would doses. their duty be fufilled; but though in all loyalty they in person besought this, they



THE ROYAL LEECH.

could not gain assent, but had to return each to his abode, where they could not sleep for anxiety. They humbly ask whether during



KYENG-POK PALACE. AUDIENCE AND RECEPTION HALLS

the night the symptoms showed any sign of reviving strength. That they may be permitted to take turns in duty and constant attendance is their million-fold prayer, which in trembling fear they venture to urge."

Royal rescript in reply: "We have acquainted ourselves with the memorial. There Treatment is prois a slight improvement. ceeding within the palace. There is no need to enter and feel our pulse."

Memorial from Royal Leech, Jan. 4 .- "Yesterday he humbly received the Royal reply, from which he reverently gathered that the Sacred condition was not yet obviously improved. The feverish anxiety of Memorialists is increased to perturbation. The potion they were com-manded to give as before, but the offer of personal attendance met with no gracious response. To trouble and distress are added sadness and melancholy. They could humbly ask what were the symptoms during the night. The weather is excessively cold, and the greater care is therefore necessary. The daily exhibition of 'Wind-dispelling' powders may, he fears, have an injurious effect on the Sacred constitution. After a careful examination of the symptoms, Memorialist, after consulting his colleagues, is agreed that restoratives need no longer be delayed. He humbly begs to bring physicians into the palace."

Royal rescript in reply: "Symptoms show Treatment is proceeding slight improvement. within the palace. To enter and feel our

pulse is quite needless."

This was on January 4. The Royal Leech continued to memorialize, and the King conof the Land, and the farce connected with the Royal illness came to an abrupt end.

It is needless to continue quotations indicative of the veiled sparring between the King and the Royal Leech; Dr. Avison all the time being in attendance. It is impossible to say how much longer this comedy would have continued to be played before the eyes of the nation had not the spirit of Count Inouye proved more masterful than the ancestral

Spirit or the will of the Sovereign.

On January 8, after all the subterfuges which I have recorded had proved unavailing, the renunciation for all time of Chinese suzerainty and the Oath of Reform, with fourteen articles, were made and taken under circumstances of great solemnity in a dark pine-wood under the shadow of Puk San, at the most sacred altar in Korea, in presence of the Court and of the dignitaries of the land. Old and serious men had fasted and mourned for two previous days, and in the vast crowd of white-robed and black-hatted men which looked down upon the striking scene from a hill in the grounds of the Mulberry Palace, where I also was a spectator, there was not a smile or a spoken word. The sky was dark and grim-ominous signs in Korean estimation-and a bitter east wind was blowing.

The Royal procession from the Kyeng-pok Palace to the altar of the Spirits of the Land, which had something of the aspect of the Kurdong, the Korean annual Royal procession to the ancestral tombs, was shorn of the barbaric splendour which made that ceremonial one of the most imposing in the Eastern world. It

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GRAND ENTRANCE OF KIENG-POK PALACE.

tinued to snub, till January 8, on which day the Memorialist and the College of Physicians in their robes of state walked submissively in the Royal procession to the altar of the Spirits

was, in fact, barbaric with the splendour left out, and there were suggestions of a new era, and a forthcoming swamping wave of Western civilisation in the presence within the palace gates of a few trim, dapper, blue-ulstered Japanese policemen, as the special protectors of the Home Minister, formerly a dangerous revolutionary.

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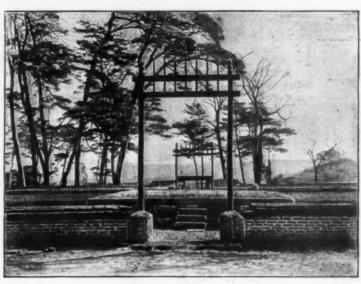
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left era, stern alace The long road outside the palace wall was

Then came the red silk umbrella and the other insignia of Korean royalty, followed, not by the magnificent state chair, with its forty bearers, but by a plain wooden chair with glass sides, borne by four men, in which sat the



ALTAR OF THE SPIRITS OF THE LAND

fined with Korean cavalry, who, out of profound respect, turned their faces to the wall and their backs and their ponies' tails to the King. Great numbers of Korean soldiers, dressed in brown, blue, and rusty black cotton uniforms -trousers sometimes a foot too short, at others a foot too long; with wadded socks, string shoes, and black felt hats of Tyrolese style, with pink ribbons round the crowns, carrying various makes of muskets-stood in awkward huddles, mixed up with the newly created Seoul police force, in blue European uniforms, and a number of handsome over-fed ponies of court officials, with saddles over a foot high, gorgeous barbaric trappings, red pompons on their heads, and a flow of red manes. The populace stood without speech or movement.

After a long delay, and much speculation as to whether, as before, the King would at the last moment resist the foreign pressure, the procession emerged from the palace gate—huge flags on trident-headed poles, mysterious purple bundles borne aloft, a stand of stones (musical instruments in use at courts in the days of Confucius) conveyed with much ceremony—groups of scarlet and blue robed men, in hats of the same colours shaped like fools' caps, the King's personal servants in yellow robes and yellow bamboo hats, and men carrying bannerets.

Sovereign, nervous and dejected. He was ashy pale, and it was obvious that in the "Sacred Condition" there was room for much improvement, and that the "ample means of healing which exist within the palace" had been by no means altogether successful.

After his Majesty had passed by, Mandarins, Ministers, and military officers were assisted to mount their caparisoned ponies; and each, with two attendants leading his pony and two more holding his stirrups, fell in behind the Home Minister, who was rendered conspicuous by his foreign saddle and foreign guard. When the procession reached the sacred enclosure, the military escort and the greater part of the cavalcade remained outside the walls; only the King, the dignitaries, and the principal attendants proceeding to the altar.

There, at the most sacred altar in Korea, invoking the spirits of five centuries of regal ancestors, the King solemnly renounced the ancient suzerainty of China and proclaimed the national independence; and there, too, with ill-concealed agitation and distaste, invoking the same ancestral spirits as witnesses, he took the oath to the fourteen reforms suggested by Japan, which have constituted the lines on which every subsequent step in advance has been taken by his kingdom.

THE PROFESSOR'S WOOING.

CHAPTER I.



T was the evening before Herr Noack's school for young ladies broke up for the summer holidays, and

Doctor Claus Seeliger, professor of the

German language and literature, sat in his room examining the exercise books of the class of selecta, and writing the reports on the half year's work of these young ladies. It was a hot night, the room felt stuffy, pile of exercise

the pile of exercise books in which the eighteen selecta girls had recorded their opinions about Schil-

ler's "Wilhelm Tell" seemed to grow no less, and Doctor Claus was sick of German literature and thankful that the long summer holidays were at hand.

His position in Herr Noack's academy was no easy one. There was hard and uninterrupted work and little for it, and any ordinary man would long since have rebelled. But the little Doctor was not an ordinary man. He was more patient than Job under his afflictions, and so modest that he believed his really solid abilities deserved no richer recognition than the tyrannical and niggardly Noack thought fit to accord to them. Nothing would have persuaded him to descend from his class-room to the spacious apartment where the principal sat, and beard the lion in his den with a plea that such sound scholarship as his and a ten hours' day of toil were worthy of better treatment. He had never asserted himself. He hated a crisis, and his dread of controversy made of him a ready prey or an easily vanquished rival for the mentally muscular people who are determined to get on in the world.

He would never forget that Sunday morning ten years ago, when, clad in his black gown and snow-white bands, he ascended the pulpit of the Jacobi church to preach his trial sermon. There was a large open-eyed congregation to hear the young probationer. If he turned out a success they would elect him to fill the vacant post of assistant pastor. But, alas! he was

not successful. He was altogether unsuccessful. He blushed and grew pale, and stammered as he gave out his text, and when the choir girls in the gallery to his left began to titter, he fairly broke down. Old Pastor Wedekind had to rise to preach a sermon which he and his parishioners knew by heart, and to explain that the ghastly pallid young man behind him had become unexpectedly unwell, and could not proceed with his address. Neither trial sermon nor any other was ever preached by Doctor Claus. It was borne in upon him with frightful convicting force that he was one of those unfortunates who had missed their vocation. So he returned to the university, and after innumerable hesitations, and doubts, and fears, he thought he would see if some sort of obscure existence might not be led somewhere as a teacher of those of tender years, where no gaping crowds need be faced, where there were no struggles for place and power, where a man utterly without aims and fearful of corroding ambitions, might slide through life unnoticed and unknown.

After many mutations through various scholastic establishments, where his nervousness and timidity caused him endless afflictions, but showed no sign of erosion in contact with the wear and tear of teaching, he found a restingplace at last in the groves of Herr Noack's academy. Here he was entrusted with a general oversight of the big selecta girls, and taught literature, in its various stages of attractiveness, to the junior classes as well. He did not so much mind the juniors, but to sit at his desk in front of the eighteen selecta, all of them so absolutely at their ease, each of them a keen and heartless anatomist of his mental condition, their thirst after the grave facts of literature always subservient to their desire for laughter, was an ordeal to which he could never accustom himself. To obtain temporary relief from it was another of the reasons for his thankfulness that the vacation was so soon to begin.

He attacked the exercise books with vigour, and read one after another those raw girlish disquisitions on Schiller's "Tell." How wooden and fatuous they all were, and Doctor Claus would have been more than human had he plied his red-ink pen with less asperity. Although he was not conscious of it, he revenged himself in this way on his tormentors. One after another he marked "Not satisfactory," "Bald," "Careless," "Inadequate." The last of the pile bore the name of Margarethe Henschell. He looked over the loosely written pages and noted the imperfect construction of the sentences and the appalling lack of ideas; but his red-ink pen remained in the inkstand, and he made neither

correction nor commentary; he read parts of the essay again and smiled and shook his head, but judgment must be passed on it, so he took

up his pen and wrote "Excellent."

"She's going home for good," he said to mself. "I must not discourage her. She's himself. a good girl." He turned back a few pages, read one or two of her cryptic sentences, outrageously ungrammatical, laughed loud and long, and then seizing his pen added, "Shows care and grasp of subject—Claus Seeliger." This was his last stroke of work that night, and as he marched about his room, smoking the cigar which he imagined was inducive of sound sleep, he was tickled with that huge joke which he had perpetrated, and laughed again and again.

The last day of term was always a great event in Herr Noack's establishment. When the girls in their latest frocks were all assembled in the large hall, Herr Noack himself appeared in a wonderful uniform of blue and gold, with several orders fastened to his broad breast, and with his cocked hat in his hand. His oration to the young ladies and staff of teachers was an effort which always entailed days of laborious preparation. It was packed with ponderous reflections of a didactic nature, and closed with exhortations to all his hearers to spread the name and the fame of Herr Noack and his seminary for young ladies to all the four corners of Germany.

These ceremonials being concluded, the various groups of girls retired to their class-rooms, and there in a state of wearing excitement awaited the teachers who were to give to each pupil the official report on the entire work of the term. In the selecta class-room eighteen young ladies, consumed with curiosity, bubbling over with excitement, wildly talking—no one heeding the speech of another, and all incapable of anything requiring stillness and rest, awaited the coming

of Doctor Claus.

The professor of literature appeared this morning to be more nervous than ever, and his lack of command of himself was visibly increased by the unusual greeting which his entrance elicited from the class. Fired by the speedy approach of the holidays, they threw off all restraint, clapped their hands and stamped their feet, and one young lady, who had learned to whistle, electrified the class with a discordant example of her art. On the way to his desk Doctor Claus noticed that only one young lady of them all, a fair-haired pretty girl, was a model of decorum. She even sought to exercise a moderating influence on the rest, and although her success was not remarkable, he was gratetul to her for the attempt, and more than ever pleased that he had written words of praise

about her somewhat singular essay on Schiller. Doctor Claus settled himself at his desk, bowed and smiled to the young ladies, who rose from their seats and returned the bow with mock gravity and much ill-suppressed tittering. The accomplished young lady who could whistle was asked to distribute the Schiller exercise books among her companions, and the simulated

expressions of wrath and grief when they beheld the Professor's condemnation of their best efforts in literature, made the simple man regret that he had permitted himself to stray from the paths of merciful justice. After all, he reflected, some of the essays were not so bad. But the golden-haired Margarethe sat blushing on a back seat, her eyes on the red words of commendation, marvelling greatly that the work, of the crudity of which she was all too conscious, had received such distinguished notice. Her state was speedily noticed by her neighbours, and laughter and applause and cries of "Bravo, Grete!" broke out on all sides, which made Doctor Claus blush and polish his spectacles, and manifest other signs of uneasiness.

Then came the last ceremony of the day. Doctor Claus rose with the girls' reports in his

"Fräulein Martha Holberg!" he called out. This young lady rose gaily from her seat, and stood before the Professor's desk, dropping

"I beg to present you with your report for last term. I wish you a very happy holiday. Good-bye."

"I wish you the same; adieu, Herr Profes-

With another curtsey, Fräulein Martha whisked out of the room, amidst the applause of those left behind. The applause she acknowledged with a sweeping bow from the door.

And so through the whole class of selecta, the girls who had received their certificates waiting for their companions in an adjoining room. Margarethe had begun to wonder when her turn would come. She fidgeted when she was one of only three left in the class-room, a state of mind which was not decreased when she saw the door of the next room slyly opened, revealing a crowd of laughing faces. Another girl was called, but it was only Lotta Knack, and when Lotta bowed and departed, Bertha Roesel was summoned, and Margarethe found herself left till the last. The door kept opening and shutting, and the sounds behind it were those of encouragement.

"Fräulein Margarethe Henschell," said the

Professor, rising from his chair.

The girl rose from her seat with brightened eyes and heightened colour, straightening back the wayward curls that fell over her forehead. She stood before the desk and curtseyed.

"Fräulein Margarethe, I beg to present you with your report for the past term. I wish you a very happy holiday, Fräulein. You are not coming back," added the Professor, with a quaver in his deep voice, "so I suppose youwill never see you again. Good-bye, Fräulein Margarethe."

He held out his hand, and grasped the soft little warm hand which was given to him.

"Fräulein, may you be very happy at home. My respects to your honoured parents. Goodbye, and God bless you, Fräulein!"

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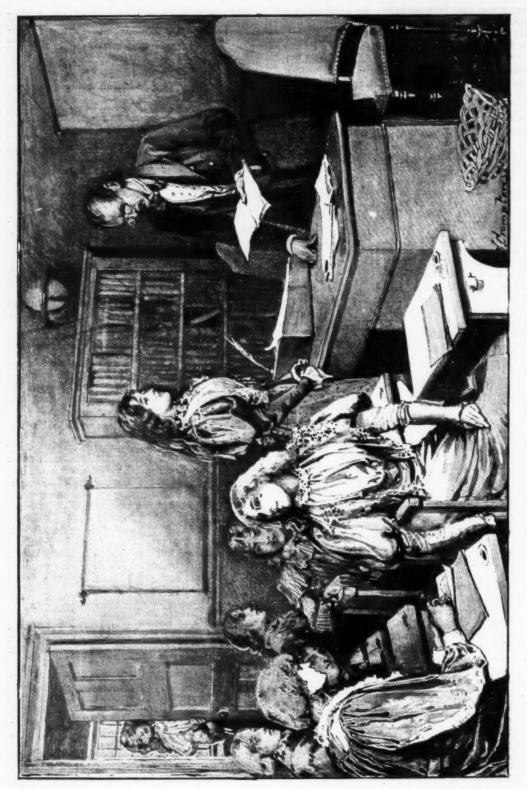
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THE PROFESSOR OF LITERATURE APPEARED MORE NERVOUS THAN USUAL,

"I wish you also much happiness, Herr Professor."

There was dead silence in the next room, and the door was opened a trifle wider. Fräulein Margarethe heard her own next words with

painful distinctness.

"Herr Professor, I am much obliged to you for all the trouble you have taken. Papa, I'm sure, would be very glad if he could see you in Würtemberg some day, when he would thank you for all your kindness to me."

Doctor Claus bowed low over the hand he still held in his, and in a lower voice he said his

last good-bye.

"Adieu, Margarethe."
"Adieu, Herr Professor."

Margarethe did not need to open the door; it was opened wide for her, and shut behind her. She found herself in the middle of a laughing, shouting crowd of her companions. "Bravo!" they shouted, and patted her on the back. "A conquest," "Sly boots," "Poor Grete," "It was really affecting," were the remarks she heard on all sides; and when her colour rose, it was only a fresh excuse for further merciless commentary on the conquest which they now asserted the Professor had made.

Lotta Knack, the ringleader of the jubilant crowd, insisted upon seeing her report, and when Margarethe demurred to gratifying this natural curiosity she snatched it from her hand, and mounted a chair to read it to the others.

"Oh!" she cried out, "this is splendid. Listen, children! German and German literature, satisfactory. French—French, you know, is Grete's strong point, next to conquest. French, excellent."

Peals of mocking laughter greeted this scandalous example of the Professor's prefer-

ences.

She resumed: "Mathematics, excellent. Why there is nothing but a long row of 'excellents' and 'satisfactories,' and 'goods.' Three cheers for Grete! Three cheers for the Professor! May happiness be their portion!"

Margarethe could but join in the universal merriment as they all romped off to their

rooms.

But Doctor Claus Seeliger was only conscious of more noise than usual. In a dreary, perfunctory sort of way he gathered up his papers, straightened his class books, and went down to the principal's room to say good-bye to Herr Noack and his colleagues

CHAPTER II.

THE school had been closed for a week, and Doctor Claus had not yet decided where he should spend his holidays. Save one elderly and quite deaf uncle, he had no near relatives on whom he could impose a visit. So he passed in review the pleasures of mountain climbing in Switzerland, of lazy days on the banks of the Rhine, of walking tours in the Black Forest, of botanical researches in Thuringia, and could not decide. Each of

these enchanting playgrounds offered endless attractions to him, above all else the seductions of rest and change from the worries of Herr Noack, the eighteen selecta girls, and the endless rows of junior tow-headed maidens who sat at his feet for literature. But Doctor Claus Seeliger hated making up his mind, and day after day the high back room grew intolerably stuffy as the midday sun poured its pitiless beams on the tiles over his head.

He was sipping his coffee between puffs of his great student's pipe when the landlady

entered.

"Two letters for the Herr Professor this morning. Good morning!" The old lady

waddled out again.

This was quite an unusual occurrence. He had no correspondents. Who could it be? He seized the two letters and looked at the strange handwritings. He turned them over in his hands. On the back of one of them was the stamp of the University of Tübingen. This awakened no idea in his mind beyond the fact that Tübingen was in Würtemberg. He tore open the envelope, and hastily looked at the enclosure. His face lighted up with a sudden glow. He rose from his seat, holding his long pipe in one hand and the letter in the other, and went over to the sunlit window. It was a letter to delight his heart, and was in these words:

"Honoured Herr Doctor,

"The Senate of the University of Tübingen at their last meeting unanimously resolved to correspond with you with the object of securing your learned services in the chair of German literature. Your contribution to belles lettres, in the valuable critical treatise which you have recently published, has made your name well known in academic circles, and the Senate of this University are glad to have it in their power to invite you to join their teaching staff. They feel that your acceptance of this position would immensely strengthen the chair of literature in the University.

"The Senate will again meet towards the close of the vacation, and it is their hope to be then in possession of a favourable reply from

you.

"Signed on behalf of the Senate."

He could hardly believe the evidence of his eyes. To think that that book of his, which had been so badly mauled by the newspapers, should have won recognition among the learned men of Tübingen! He strode hastily about the little room, and the stirrings of ambition, which he had thought long since laid, began to move him mightily. Why should he pass his best prime toiling for the Herr Noack, living in penury, in the close unhealthy atmosphere of a great city, when honour and reputation and affluence awaited him in the beautiful Würtemberg land on the vine-clad banks of the Neckar?

And then, in his rapid movements to and fro

across the room, it suddenly occurred to him that there was another letter. He took it up and looked at the envelope—another letter with a Würtemberg stamp! It shot through his head like a flash of illuminating lightning that this letter had something to do with Fräulein Margarethe. He was right. One hasty reading did not suffice, so he read it again and again.

"Most honoured Herr Doctor," it began,

"I avail myself of the earliest opportunity to thank you for the trouble you have taken in the instruction of my daughter Margarethe during the year she has been under your tuition. The report of her term's work has given me unbounded satisfaction, and I can only repeat my hearty thanks. If during your holiday, Herr Doctor, you should find yourself in our neighbourhood, we would all be delighted to see you, and it would afford us greater pleasure still if you found it convenient to spend as long a time as possible with us. My daughter sends you a hearty greeting."

The Professor was as one transformed. The lassitude and indecision of the last few days vanished as if by magic. "Ah!" he said, as he moved rapidly about, alert and with a heightened colour, "this decides me. I'll go to Switzerland, and visit them on my way south. That will be glorious, and then I'll come back to Tübingen and be in time to see the Senate, and, lucky dog that I am—why, Tübingen is quite near to her, and—"

But he did not allow himself to think the matter out, for over the sun and the brightness

the clouds began to gather.

"What an old fool I am! I'm nearly old enough to be her father. I've been a doctor of philosophy for eight years. Yes, I'm an old

fool. Doctor of philosophy indeed !"

He went over to his little looking-glass and meditated on what he saw there. It was a sane and honest enough face, the face of a gentle scholar. But he was not satisfied. Still it was to be Switzerland; and in a surprisingly short space of time he had completed his modest preparations for the journey, and found himself en route for the south with a railway ticket for Rutlingen, the village where the Henschells lived, in his possession. He passed Tübingen on his way, and looked up charmed at the old town on the Neckar, with its great white Schloss on the hill, its long alleys of planetrees, and its opulent sunny terraces of vines. He pictured himself already there in a snug house near the University with his books all about him-Professor Doctor Seeliger of the Royal University of Tübingen. But at the end of his dream came the unsatisfactory notes of interrogation beyond which he could not go. "Shall I be alone there?" "And is loneliness in Tübingen any better than loneliness with Herr Noack?"

The train was swiftly drawing nearer to Rutlingen, through delectable corn-lands and vine slopes and red-roofed villages clustering low under gracious trees. This was Margarethe's country, he reflected; and when he realised that the distant village ahead to which the train was speeding was really Rutlingen, his heart began to beat uncomfortably, and he wished the journey longer.

The station-master knew the Henschells' house. Everybody in Rutlingen knew the old Stuttgart merchant who had come to live the evening of his days here. "Follow the main road through the village," said the railway man, "until you come to a white house well back from the road with two big walnut-trees in front of it. That's Herr Henschell's."

It was a paradise at which he arrived. The railway man was no poet. Doctor Claus, a dweller in cities all his life, was enchanted with the old straggling country house overgrown with roses and jasmine and honeysuckle, with the brilliant flower-beds, the shaven grass and the fantastically clipped evergreens, at the stretches of field and garden and vineyard away behind the house.

An old gentleman sitting in the verandah, seeing him standing at the gate, approached.

"Herr Henschell, I presume?" asked Doctor Claus, with beating heart.

"At your service, Sir. Greetings!"

"My name is Seeliger, Doctor Claus Seeliger."

"Ah, the honoured preceptor of my dear daughter! Come in, Sir, come in. What a moment this is, to be sure! Margarethe will be so pleased. So will all of us. Come along,

Sir. Give me your bag."

Doctor Claus was in a flutter of nervousness, for at any moment Margarethe might appear. He walked by the side of Herr Henschell, who had already shaken his hand three times, and at each shake he was assured that Grete would be overjoyed when she knew of his arrival.

"She's gone out to call on a friend, but will be back for dinner. Here's my wife. Wife, this is Doctor Seeliger, Grete's professor. Grete

will be glad."

There was another lady in the room; she had been sitting at the window reading. The Professor made a deep obeisance, and she rose and bowed stiffly.

"My niece, Professor, Frieda Henschell, my poor dear brother's daughter. Grete's professor—vou're glad to see him. Frieda?"

She bowed again quite coldly, and Doctor Claus felt chilled at her apparent want of harmony with her exuberant relative. She sat down and went on with her book, while the old couple took him to his room, along passages odorous of lavender and rosemary.

"Now, here you are, Herr Professor. There's a view! Those are our vines. We'll let you taste the juice at dinner. Prime Rutlingener, I can tell you. Nothing like it in Stuttgart. And you gather your apricots through the open window, and pluck the jasmine also, if you're fond of flowers. Grete's fond of flowers. She looks after the flowergarden. Come down to the drawing-room

when you're ready. We'll wait you there. Dinner'll be ready soon, and Grete must be back by now. Auf Wiedersehen, Herr Pro-

"What a dear old man! What a paradise!" He leaned out and sniffed at the jasmine and roses. "Fräulein Frieda doesn't like me, I can see, and I don't think I'll take to her. How-ever, it's only for a few days. But I suppose she's very clever. She seems fond of read-

ing."

He was mistaken. Frieda Henschell was not clever. Six years older than her cousin, she had been left in Herr Henschell's charge on the death of her father. That was twelve years ago, and since then she had done nothing else than read novels and requite the kindness of her uncle by querulous repinings and ingratitude. Between her and her cousin there was nothing in common. She followed Margarethe with envious eyes; she compared her own sallow face and dusky hair with the young girl's brilliant skin and plenteous golden locks, trying at times to solace herself with the thought that externals did not count for much in this world. Insufficiently educated, with no intellectual training, she yet imagined herself a superior mind, and professed the utmost scorn for the unaffected pursuits which Margarethe had begun to follow since her return from school—laborious flower-gardening and hours in the kitchen, interrupted with honest feminine zeal for a new hat and a stylish frock. It was a bitter thought to Frieda that the arrival of her cousin in the pride of her young beauty had made a considerable stir in Rutlingen, and she smiled in a superior and bitter way when the youths of the neighbourhood, who had seemed to avoid her uncle's house until now, began to evince a considerable amount of assiduity in calling to inquire after his health and the health of Frau Henschell. She knew well enough what they were after, and scorned men in general, and Grete in particular for attracting them. And now this Professor had arrived with his stiff pedantic speech and awkward nervous ways. She would show him how little she cared for him and his sort.

"Still, he was a man of brains," she said to herself, "or he would not be a Doctor or a professor in a great school like Herr Noack's. So maybe we'll hear something better now than eternal talk about the garden and the potato salad, and those horrid insects on the vines. But nobody will be able to converse with him but myself."

This was a source of satisfaction to her.

These were her pleasant thoughts when the door opened and the Professor, bowing, and looking spruce and neat, entered the room. Margarethe was there, and she ran forward and took his hand, and in honest simple phrases expressed her pleasure at seeing him. Doctor Claus could only beam upon her through his gold-rimmed spectacles; the sentences would not come to his lips which he had composed above in his room. He muttered something

which she believed referred to Herr Noack's school, and to the lectures there on German literature, but she failed to make a continuous intelligible whole of it. It was certainly not at all what the Professor had intended to say.

The dinner passed over, Herr Henschell filling the office of host with much genial bustle and joyousness, and to the increase of his daughter's pride in her father. Fräulein Frieda sat morosely by, answering when spoken to with monosyllables. The Professor made manful struggles after self-possession, dividing his attentions equally between the three ladies, and defending himself from the hospitable assaults of his host, who was pressing the ruddy Rutlingener on his attention. When it was all over Margarethe told the Professor that he must come and see her garden, her pride she called it. It was an invitation which over-whelmed him with confusion, and he looked round to see if no one would accompany them.

"Oh, go with her alone," cried Herr Henschell; "don't be afraid, take your pipe."

"But perhaps Fräulein Frieda-

"No, thank you, Professor. I have seen the garden before. I have been looking at it for years. I think I know every rose in it. I'll go on with my book. You'll enjoy yourself better without me."

She sat at the window and watched her light-hearted cousin, in her pure white dress, skim along in front of the Professor and pause every now and then before a favourite rose-tree. The Professor was listening deferentially to all she had to say.

"The hussy!" exclaimed Frieda, as Grete plucked a great red rose and placed it in the Professor's buttonhole. She rose with a bounce, went to her room, banged the door behind her,

and was seen no more that night.

CHAPTER III.

'HE happy days passed quickly, and Doctor Claus still remained a welcome guest with the Henschells. Even had he been in the least degree anxious to bring his visit to a close -which he was not—the hospitable solicitation of Herr and Frau Henschell, backed by Margarethe's sweet entreaty, put all thoughts of Switzerland out of his head. The breasting of Alpine slopes, and the extended panorama of lake and valley to be obtained from some snowy summit, were all very well in their way, but they were not so life-giving as those quiet rambles through the Würtemberg hills, and the sight of the fairest maid with the bluest eyes in

But after a few days the Professor began to display a curious complexity of character which set the whole household thinking. His first week he had devoted to the closest attention on Margarethe, and the young girl seemed thoroughly to appreciate him. They seemed thoroughly to appreciate him. They seemed to have become quite intimate. She took him round to her hens and pigeons, they strolled about the garden together, and the Professor

even succeeded in mustering up sufficient courage to turn his mind to the contemplation of her beehives, although his vicinity to those industrious but uncertain insects caused him a world of secret terror. All these things

proved intimacy.

But all at once everybody concerned was amazed to see him turn from Grete to Frieda. No afternoon walk would be complete unless Frieda were with them, and it had become customary after dinner for the Professor to present himself before Frieda in the drawing-room and beg her to accompany them in their usual excursion to the view tower on the neighbouring hill. Frieda knew her value, and much coaxing and persuasion had always to be exercised before she consented. Ostentatiously she would take her novel with her, and on the seat on the top of the hill, when the Professor sought to engage her in conversation, she was so deeply immersed in her book that only the driest and shortest of answers were vouchsafed to him. On such occasions Grete sat by and only smiled and shrugged her shoulders, taking little apparent notice of this sudden change. But Herr Henschell had been observing it all closely, and used to say to his wife:

"Frau, the Professor, I fear, has quarrelled with Grete. You should talk to the girl. She's playing her tricks on him. Still, I'll be glad if he takes to Frieda. She's a bookish girl, and if they get to like one another I'll not let her go to him empty-handed. They ought to get on very well together, although he will have trouble if she lets her temper get the better of

her."

And the Frau would nod her wise old head in

reply.

"The Professor is no fool," she would say; "he is a man of mature years. Don't you interfere, Hans. Let the young people work the matter out among themselves. They know

more about these things than we do."

The days ran on, and Doctor Claus devoted himself assiduously to Fräulein Frieda. His conversation, to any keen listener, would have perhaps appeared distraught and disconnected, but Frieda was not a keen listener. At first she felt inclined to believe that the Professor gave her his attention out of pique about something that had happened between him and Grete, but she gradually began to accept the curious court he paid her as a tardy acknowledgment on his part of her superior mental equipment, as homage to ability which raised her far above her cousin in his eyes. After those walks when he had discussed with her difficult problems of life or various abstruse systems of philosophy, she would retire to her room and sit before her glass, smoothing her hair and smiling at the reflection of her commonplace face.

"How stupid the man is!" she would say.
"Why does he spin these long yarns about his Greek philosophers? I suppose he would impress me with his learning. There has been some quarrel, I suppose, with Grete. I knew

from the first that he would soon tire of the silly little chit. I wonder is he worth winning?"

I'd do it to spite Grete."

Doctor Claus had been three weeks the guest of the Henschells, and every day he spoke of going, but he was easily persuaded to stay longer. Herr Henschell explained that it was now not worth while going to Switzerland for the short time that still remained of the holidays.

"Just make yourself comfortable where you are until it is time to buckle on your harness again. Splendid air here. The fruit is ripening fast, and the Frau and the girls would be

miserable if you left us."

So Doctor Claus finally decided to remain; but all the same he was visibly growing more fidgety. He took nervous walks up and down his room and in the garden behind the house when everybody else had gone to bed. He did not sleep very well, and once or twice Herr Henschell and the Frau spoke together with concern about his pale face and the black rings about his eyes. The days had grown sultry, and no one cared to be out in the sun. Grete busied herself more than ever about the house, and the Professor and Frieda would sit for hours together in the verandah. She had begun to discover that he was not nearly so great a fool as she had supposed. She had begun to feel that his presence beside her was pleasant and no longer bored her, and she was flattered beyond measure when he turned his back on the others and spoke about his literature and his other studies. She had no real appreciation for what he said, but it was said for her alone, and that had become comforting to her in those last few days.

The holidays were drawing to a close. It was a Saturday, and the Professor had announced that he must leave Rutlingen on the following Monday, for Tübingen, where he had some private business of importance to attend to. The Henschells were far too polite to ask him the nature of this business, and he did not vouchsafe to enlighten them. He had retired to his room for the night, but he was not sleepy. He sat in the dark at the open window and looked out at the lovely moonlit garden and at the vineyards and hills beyond, over which a magical blue haze had settled, softening the hard outlines of things. The Professor was not happy, for he felt he was nearing a crisis,

and he hated crises.

He was plunged in distracting thought, seeking diligently, but finding no clear way out of his anxieties, when he became suddenly conscious of something moving in the garden below his window. He fastened his gaze upon it. It was Frieda walking slowly towards the garden. He watched her until she was hidden among the shrubs, then, rising, he stole down the stairs, opened the door and hastened after her with tumultuously beating heart. He found her seated on a shaded bench, but she showed no signs of surprise at seeing him. She held out her hand.

"Sit down, Professor. I could not sleep. Let us talk. I felt sure I would see you here to-night. I have often seen you from my window walking about in the garden. The nights lately have been so sultry and oppressive."

The Professor thanked her and sat down, but

remained silent.

"Professor," said Frieda after a pause-"Professor, have you ever read any novels?" "No-at least I don't think so-very few."

"You should read novels. They introduce you to quite another world-a world remote from this."

"But that is just why I dislike them. In real life everything is much more natural. I

like nature."

"I have just been reading a book called 'Friends." The Professor sighed. "You should read it."

To this remark he had no answer ready.

"Herr Professor, do you know, I am very curious about something." Frieda hung her head and fingered the tassels of her scarf.

"What is it, Fräulein?"

Frieda twisted her head about and then turned away her face. "Have you ever had a friend? I mean-have you ever cared for anyone-a girl?"

Doctor Claus jumped from his seat as though he had been stung, and stood facing her.

"Fräulein, don't ask me. Wait a little. You, only you I feel understand me. All these weeks I have clung to you and hung upon your Yes, you are my friend. I feel it now, but ask me nothing until to-morrow. Ah, I know now what friendship is."

During this strange disjointed recital Frieda was sitting with bowed head. She raised her

face to him.

"But, Herr Professor, I had always thought it was Grete."

"Grete!" But he could add nothing to this one word. He stared at her for a moment; then with an utterance that was half gasp, half sigh:

"Good-night, Fräulein, good-night. Yes, we understand one another now. Good-night

-may I say Frieda?"

He bent down and kissed her hand. Turning from her abruptly, he hastened away and was

speedily lost in the shadows.

The next day was Sunday, and Herr Henschell and his guest went to the village church together, leaving the ladies at home. The heat was too oppressive for them. On their way back Doctor Claus thought the time had come when he should tell his host about the flattering invitation he had received from the Senate of the Tübingen University, and the prospect he entertained of settling down in the old Würtemberg town. The good old man was profuse in his congratulations.

"Won't Grete just be pleased," he exclaimed, "and Frieda too, and the Frau! I have got to like you, man. I am beginning to look upon you almost as a son. I never had a son." The Professor was relieved to see that they had

reached the house.

Herr Henschell at once imparted to the ladies the good news he had just heard from the Professor, and all that afternoon, both before and after dinner, they never tired of congratulating their guest, and speaking of the old Neckar town which they had all known from their childhood. Frieda entered into the conversation with unwonted liveliness and zest. She knew Tübingen well. She had lived there as a child, and she and the Professor devoted a long hour to looking at photographic views of the old place, which she had unearthed from some hidden corner in the house, where they had hitherto lain neglected.

Frieda spent the greater part of the evening of Sunday in the garden. She sat by herself on the shady bench and waited for the Professor. She believed now that he loved her and would like to tell her of his love, but his extreme nervousness held him in check, or maybe it was some false feeling of pride which made him think that a poor professor of literature was no fit match for the niece of a wealthy merchant. But still more certain was she that she loved him, and she had begun to feel that the love of him was cleansing her heart of all its gall and spitefulness and folly.

At last he appeared, walking slowly along the walk with bowed head. Frieda's heart was palpitating, and a tense hungry look was in her

"My dear friend," he said, and took her and. "I have only a moment. Herr Henhand. schell is waiting for me. I have something to say to him. I have resolved to speak. I must speak. You asked me last night if I had ever loved a maid. Yes, I love a maid as no man has ever loved before. Dear, good Frieda, tell me this. Should I let her know? Does she love me? You must know, Frieda. Does she love me?"

Frieda took his hand, which rested in hers, and drew it to her lips. She rose from her seat and looked long and wistfully in his eyes.

"Yes, yes, Claus, she loves you. She loves you with her whole heart and soul."

He would have taken her in his arms, but she sprang from his offered embrace and fled with burning face to her own room.

She pleaded a headache and did not go down to supper that night. She would see him in the garden later when the moon had risen, and he would come out to her, and together they would walk up and down the shadow-dappled

She moved uneasily about her room, waiting for the darkness to set in, waiting for the stillness and the night which was to bring him to her. The leaden hours dragged slowly along, but she would wait no longer their tardy march. Throwing her scarf over her head, she descended to the hall. From the open dining-room came sounds of merriment, her uncle's jovial voice heard loud and clear above the others. making her way across the hall to the door Herr Henschell caught sight of her.

"Frieda, Frieda," he called out, "you must

come in for a minute. How's your head, dear?

We have great news for you."

Her uncle's boisterous invitation bored her. She expected to hear one of his tiresome jokes; but to humour him she entered the room. Her aunt and uncle were sitting at opposite ends of the table with beaming happy faces, and close together were Dr. Claus and Grete. Grete sprang to her feet and ran to her cousin, who looked strange and dazed and haggard.

She kissed Frieda on both cheeks and flung

her arms round her neck.

"Are you not glad, Frieda? You are glad?

He is a darling, my Claus. He told me that he asked you, and you said you were sure I loved him with my whole heart and soul. You are glad, Frieda?"

The Professor came forward, his eyes all bright and shining and triumphant. He took Frieda's hand, but she gently withdrew it.

"I think I understand," she said in a choked, broken voice. "I'll go into the garden for a little. My head aches."

She put her hand to her forehead and passed

out.

MICHAEL A. MORRISON.

CURIOSITIES OF WORDS.

IM is a simple English word, of well-known meaning; but few ordinary readers will connect it with estimate, and yet both words represent the Latin æstimare. These two verbs furnish a good example of what is meant by the common speech of the people and learned speech. The Latin verb in passing through French organs of speech was cut down into esmer, from which we get the English word. After the revival of learning in the sixteenth century educated writers began to take their words direct from Latin, and so we get the word estimate. The connexion in sense will be seen when we consider that in aiming we calculate both the direction desired and the force required in delivering a blow or launching a missile.

AISLE.—The form of the word is a monument of confusion between two ideas. The oldest spelling is *ele*, which is also a French word, the French form of Latin āla, a wing, and so properly employed to signify a division of a church. But in the course of three centuries it was mixed up with *isle*, an island, apparently with the notion that a *separate* part of the church was intended, and was spelt accordingly. The present spelling is a compromise between the two words, representing the different ideas.

ALLIGATOR.—The dictionary remarks that this word has "an etymological and literary appearance." This, no doubt, put readers off the scent in tracing its origin, and leads them to search for it in Latin. It is, however, taken from Spanish. The Latin lacerta, "lizard," becomes in Spanish lagarto, and with the article el or al lagarto the lizard par excellence, as being the biggest saurian known. The word in English becomes allagarto, etc., and takes an ending er or or after the well-known pronunciation of 'tater, feller, for potato, fellow.

ALLY or ALLEY.—A kind of marble well known to schoolboys, though a strange word to other people. Schoolboys do not often trouble their heads about the origin of their terms; if any do they may be interested though

surprised to learn that this name for their "taw" is believed to be an abbreviation of *alabaster*. The connexion in sense is obvious.

BEAD, BID.—One of the early senses of bid was "to ask, pray," and the corresponding sense of bead was "a prayer"; hence to bid a bead was "to pray a prayer." From the use of the rosary in reciting Ave Marias and Paternosters the sense of "prayer" was forgotten in the thing used to mark it, and the word bead came to mean "a hollow perforated ball," and after that anything of the same shape, as a drop of dew, a bubble of foam, etc. The use of bid above mentioned has quite died out, and in after times to bid prayers meant rather "to tell or order the people what they are to pray for," as in the form called the Bidding Prayer, beginning, "Ye shall pray," etc.

This use of bid arises from the fact that it represents two Anglo-Saxon verbs, one of which meant "to offer" and the other "to ask"; but both had the sense of "command." This sense of "offer" further explains the phrase to bid at an auction and to make a

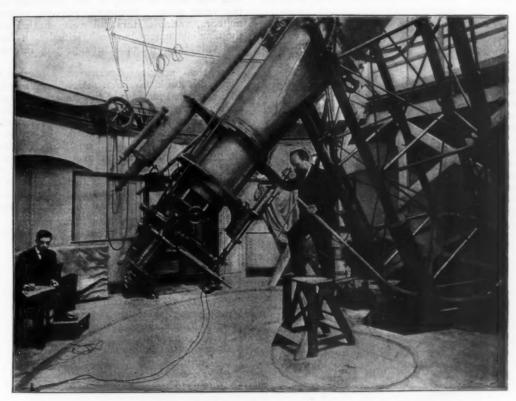
bid.

BLIZZARD.—A Yankee word, which has grown up somehow in the course of this century. The sound is expressive enough, and probably arose from attempts to represent the blinding whirr of the snowstorm. It has not been traced to any known origin, but was common in the American papers in the winter of 1880-81, remembered here for "Black Tuesday." One earlier instance is recorded, but that is in the sense of "a poser."

Bogus.—Another word for which we have to thank our American cousins. In 1827 a gang of coiners were surprised at their work in the State of Ohio. Their machine being produced before the public gaze one of the crowd pronounced it a "bogus," *i.e.* apparently a mysterious-looking object. *Bogus*, therefore, is a first cousin to *bogey*, though it is now used only as an adjective, to indicate, according to its origin, what is counterfeit and sham.

CELESTIAL CHEMISTRY.

BY F. WALTER MAUNDER, F.R.A.S.



THE "HALF-PRISM" SPECTROSCOPE ON THE 28-INCH REFRACTOR.

(From a photograph by Mr. D. Edrey.)

THERE is one great department of astronomy to which no reference has yet been made in this present series of articles on Greenwich Observatory, and yet it is a department which has the greatest of interest for the general public. This is the department of astronomical physics, or astrophysics, as it is sometimes more shortly called; the astronomy, that is, which deals with the constitution and condition of the heavenly bodies, not with their movements.

The older astronomy, on the other hand, confined itself to the movements of the heavens so entirely that Bessel, the man whose practical genius revolutionised the science of observation, and whose influence may be traced throughout in Airy's great reconstitution of Greenwich Observatory, denied that anything but the study of the celestial movements had a right to the title of astronomy at all. Hardly more than sixty years ago he wrote:

"What astronomy is expected to accomplish is evidently at all times the same. It may lay down rules by which the movements of the celestial bodies, as they appear to us upon the earth, can be computed. All else which we may learn respecting these bodies, as, for example, their appearance, and the character of their surfaces, is, indeed, not undeserving of attention, but possesses no proper astronomical interest. Whether the mountains of the mooi, are arranged in this way or in that is no further an object of interest to astronomers than is a knowledge of the mountains of the earth to others. Whether Jupiter appears with dark stripes upon its surface, or is uniformly illuminated, pertains as little to the inquiries of the astronomer; and its four moons are interesting to him only for the motions they have. To learn so perfectly the motions of the celestial bodies that for any specified time an accurate computation of these can be given —that was, and is, the problem which astronomy has to solve.

There is a curious irony of progress which seems to delight in falsifying the predictions of even master minds as to the limits beyond which it cannot advance. Bessel laid down his dictum as to the true subjects of astronomical inquiry, Comte declared that we could never learn what were the elements of which the stars were composed, at that very time the first steps were being taken towards the creation of

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yss a sed a research which should begin by demonstrating the existence in the heavenly bodies of the elements with which we are familiar on the earth, and should go on to prove itself a true astronomy, even in Bessel's restricted sense, by supplying the means for determining motion in a direction which he would have thought impossible—that is to say, directly to or from us.

THE TRIUMPHS OF THE SPECTROSCOPE.

The years that followed Kirchhoff's application of the spectroscope to the study of the sun, and his demonstration that sodium and iron existed in the solar atmosphere, were crowded with a succession of brilliant discoveries in the same field. Kirchhoff, Bunsen, Angström, Thalèn, added element after element to the list of those recognised in the sun. Huggins and Miller carried the same research into a far more difficult field, and showed us the same elements in the stars. Rutherfurd and Secchi grouped the stars according to the types of their spectra, and so laid the foundations of what may be termed stellar comparative anatomy. Huggins discovered true gaseous nebulæ, and so revived the nebular theory, which had been supposed

their constitution. Glowing hydrogen, again, was, in the observation of total eclipses, seen to be a principal constituent of those surroundings of our own sun, which we now call prominences and chromosphere. Then the method was discovered of observing the prominences without an eclipse, and they were found to wax and wane in more or less sympathy with the solar spots. Sunspots, planets, comets, meteors, variable stars, all were studied with the new instrument, and all yielded to it fresh and valuable, and often unexpected, information.

In this activity Greenwich Observatory practically took no part. Airy, ever mindful of the original purpose of the Observatory, and deeply imbued with views similar to those which we have quoted from Bessel, considered that the new science lay outside the scope of his duties, until in Mr., now Sir William, Huggins's skilful hands the spectroscope showed itself not only as a means for determining the condition and constitution of the stars, but also their movements—until, in short, it had shown itself as an astronomical instrument even within Bessel's narrow definition.

The principle of this inquiry is as follows:



THE ASTRONOMER ROYAL'S ROOM.
(From a photograph by Mr. E. Walter Maunder.)

crushed when the great telescope of Lord Rosse appeared to have resolved several portions of the Orion nebula into separate stars. The great riddle of "new stars"—which still remains a riddle—was at least attacked, and glowing hydrogen was seen to be a feature in

If a source of light is approaching us very rapidly, then the waves of light coming from it necessarily appear a little shorter than they really are, or, in other words, that light appears to be slightly more blue—the blue waves being shorter than the red—than it really is. A similar

thing with regard to the waves of sound is often noticed in connection with a railway train. If an express train, the whistle of which is blowing the whole time, dashes past us at full speed, there is a perceptible drop in the note of the whistle after it has gone by. The sound waves as it was coming were a little shortened, and

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The principle is clear enough. The actual working out of the observation was one of very great difficulty. The movements of the stars towards us, or away from us, are, in general, extremely slow as compared with the speed of light itself; and hence the apparent shift in the position of a line is only perceptible when a very



THE WORKSHOP

(From a photograph by Mr. E. Walter Maunder)

the whistle therefore appeared to have a sharper note than it had in reality. And in the same way, when it had gone by, the sound waves were a little lengthened, making the note of the whistle appear a very little flatter.

THE PRISM AS A SPEED MEASURER.

Such a change of colour in a star could never have been detected without the spectroscope; but since when light passes through a prism the shorter waves are refracted more strongly, that is to say, are more turned out of their course than the longer, the spectroscope affords us the means of detecting and measuring this Let us suppose that the lines of change. hydrogen are recognised in a given star. we compare the spectrum of this star with the spectrum of a tube containing hydrogen and through which the electric spark is passing, we shall be able to see whether any particular hydrogen line occupies the same place as shown by the two spectra. If the line from the star is a little to the red of the line from the tube, the star must be receding from us; if to the blue, approaching us. The amount of displacement may be measured by a delicate micrometer and the rate of motion concluded from it.

powerful spectroscope is used. This means that the feeble light of a star has to be spread out into a great length of spectrum, and a very powerful telescope is necessary. The work of observing the motions of stars in the line of sight was started at Greenwich in 1875, the "Great Equatorial" being devoted to it. This "Great Equatorial" being devoted to it. This telescope, of 124 inches aperture, was not powerful enough to do much more than afford a general indication of the direction in which the principal stars were moving, and to confirm in general way the inference which various astronomers had found, from discussing the proper motions of stars, that the sun and the solar system were moving towards that part of the heavens where the constellations Hercules and Lyra are placed. In 1890, therefore, the work was discontinued, and as already mentioned, the 124 telescope by Merz was removed to make room for the present much larger instrument by Sir Howard Grubb, upon the same mounting, and the photograph at the head of this article shows how the spectroscope was attached to the new instrument. telescope being much larger than the one for which mounting and observing room were originally built, it was not possible to put the spectroscope in the usual position, in the same

straight line as the great telescope. It was therefore mounted under it, and parallel to it, and the light of the star was brought into it after two reflections. The observer therefore stood with his back to the object and looked down into the spectroscope. It had, however, become apparent by this time that this most delicate field of work was one for which photography possessed several advantages, and as Sir Henry Thompson had made the munificent gift to the Observatory of a great photographic equatorial, it was resolved to devote the 28-inch

THE 30-INCH REFLECTOR WITH NEW SPECTROSCOPE ATTACHED. (From a photograph by Mr. E. Walter Maunder.)

telescope chiefly to double-star work, and to transfer the spectroscope to the "New Building."

THE NEW OBSERVATORY.

The "New Building" in the south ground is crowned indeed with the dome devoted to the great Thompson photographic refractor, but this is not its chief purpose. Its principal floor will contain four fine rooms which will be used as "computing rooms"-for the office work, that is to say, of the Observatory. Of these the principal is in the north wing, where the main entrance is placed, and is occupied by the Astronomer Royal and the two chief assistants.

The basement will contain the workshops of the mechanics and carpenters. The room shown in the photograph is that occupied by Mr. G. E. Niblett, whose skill is in constant requisition in devising, repairing, or keeping in order the many mechanical arrangements upon which somuch depends, and under whose care is also placed the electric lighting of the Observatory. The upper floor will eventually be used for the storage of photographs and manuscripts, and the terrace roofs of the four wings will be exceedingly convenient for occasional observations,

as, for example, of meteor showers. The central dome, which rises high above the level of the terraces, is the only room in the building devoted to telescopic work. Like the New Altazimuth building, aring of circular lights just below the coping of the wall recalls the portholes of a ship, and again reminds us of the connection of the Observatory with naviga-

Here the spectroscope is now placed, but not, as it happens, on the Thompson refractor. The equatorial mounting in this new dome is a modification of what is usually called the "German" form of mounting-that is to say, there is but one pier to support the telescope, and the telescope rides on one side of the pier and a counterpoise balances it on the other. The "Great Equatorial," on the other hand, is an example of the English mounting. Here there are two piers, one north and the other south, and the telescope swings in a frame between them. In the new dome three telescopes are found rigidly connected with each other on one side of the pier, the telescopes being (1) the great Thompson photographic telescope, double the aperture and double the focal length of the standard astrographic telescope used for the International Photographic Survey; (2) the 12\frac{3}{4} telescope by Merz, that used to be in the great dome, but which is now rigidly connected with

the Thompson refractor as a guide telescope; and (3) a photographic telescope of 9 inches aperture, also a present to the Royal Observatory by Sir Henry Thompson, and used for photographing the sun or in eclipse expeditions. The counterpoise to this collection of instruments is not a mere mass of lead, but a powerful reflector, 30 inches aperture, and it is to this telescope that the spectroscope is now attached. At the present time, however (August 1898), work has not been commenced with it.

SURVEYS OF MARS.

With this attempt to determine the motions of the stars as seen not only projected on the sky, but as they approach us or retreat from us, the story of the regular, the routine, work of the Observatory comes to an end. But, of the Observatory comes to an end. possessing the telescopes, and possessing the trained observers, it has been inevitable that there should occasionally have been some stepping outside the rigid programme. So a number of beautiful drawings of the moon and planets were made by Mr. James Carpenter, and the writer was enabled to make a pretty complete study of the planet Mars in the Opposition of 1877, and to secure occasional drawings of it in later years. 1877 was famous as the year when Schiaparelli made his great discovery of the "canals," but he did not notice them until after the close of the Greenwich observations. Several of them were, however, distinctly seen in Greenwich in the two following oppositions of Mars in 1879 and 1881-2; but they seemed to the observer not hard, sharply defined channels on the surface of the planet, but somewhat diffused and shaded lines, and on no occasion has the mysterious phenomenon of "gemination," or doubling of the canals, been observed at Greenwich, and there seems reason to believe that it is entirely an effect either of strained sight or of imperfect focussing.

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THE CHEMISTRY OF COMETS.

So, too, on rare occasions the spectroscope has been turned on the planets. As these shine by reflected light, their spectra are normally the same as that of the sun. Mars appeared to the writer, as to Huggins and others, to show some slight indication of the presence of water vapour in its atmosphere. Jupiter and Saturn show that their atmospheres contain some absorbing vapour unknown to ours. And Uranus and Neptune, faint and distant as they are, not only show the same dark band given by the two nearer planets, but several others. More attractive has been the examination of the spectra of the brighter comets that have visited The years 1881 and 1882 were especially rich in these. The two principal comets of 1881 were called after their respective discoverers, Tebbutt's and Schaeberle's. were not bright enough to attract popular attention, though they could be seen with the naked eye, and both gave clear indications of the presence of carbon, their spectra closely resembling that of the blue part of a gas or candle flame. There was nothing particularly novel in these observations, since comets usually show this carbon spectrum, though why they should is still a matter for inquiry; but the two comets of the following year were much more interesting. Both comets came very near sun. The earlier one, called from indeed to the sun. its discoverer Comet Wells, as it drew near to the sun, began to grow more and more yellow, until in the first week of June it looked as full an orange as even the so-called red planet, Mars. The spectroscope showed the reason of this at a glance. The comet had been rich in

sodium. So long as it was far from the sun the sodium made no sign, but as it came close to it the sodium was turned into glowing vapour under the fierce solar heat. And as the writer saw it in the early dawn of June 7, the comet itself was a disc of much the same colour as Mars, whilst its spectrum resembled that of a spirit lamp that has been plentifully fed with carbonate of soda or common salt. "Great Comet" of the autumn of the same year, and which was so brilliant an object in the early morning, came yet nearer to the sun, and the heating process went on further. The sodium lines blazed up as they had done with Comet Wells, but under the fiercer stress of heat to which the Great Comet was subjected, the lines of iron also flashed out, a significant indication of the tremendous temperature to which it was exposed.

SUNSPOT DIFFERENCES.

There are two other departments of spectroscopic work which it was attempted for a time to carry on as part of the Greenwich routine. These were the daily mapping of the prominences round the sun, and the detailed examination of the spectra of sunspots. Both are almost necessary complements of the work done in the heliographic department—that is to say, the work of photographing the appearance of the sun day by day, and of measuring the posi-tions and areas of the spots. For the spots afford but one index out of several, of the changes in the sun's activity. The prominences afford another, nor can we at the present moment say authoritatively which is the more significant. Then again, with regard to the spots themselves, it is not certain that either their extent or their changes of appearance are the features which it is most important for us to study. We want, if possible, to get down to the soul of the spot, to find out what makes one spot differ from another; and here the spectroscope can help us. Great sunspots are often connected with violent agitation of the magnetic needles, and with displays of auroræ. But they are not always so, and the inquiry "What makes them to differ?" has been made again and again, without as yet receiving any unmistakable answer. The great spot of November 1882, which was connected with so remarkable an aurora and so violent a magnetic storm, was as singular in its spectrum as in its earthly effects. The sun was only seen through much fog, and the spectrum was therefore very faint, but shooting up from almost every part of its area, except the very darkest, were great masses of intensely brilliant hydrogen, evidently under great pressure. The sodium lines were extremely broadened, and on November 20 a broad bright flame of hydrogen was seen shooting up at an immense speed from one edge of the nucleus. A similar effect—an outburst of intensely luminous hydrogen—has often been observed in spots which have been accompanied by great magnetic storms, and it may

even be that it is this violent eruption of intensely heated gas which has the directest connection with the magnetic and auroral dis-

turbances here upon earth.

This sunspot work was not carried on for very long, as only one assistant could be spared for the entire solar work of whatever character. Yet in that time an interesting discovery was made by the writer—namely, that in the green part of the spectrum of certain spots a number of broad diffused lines or narrow bands made

and the days when the sky is sufficiently pure round the sun for successful spectrum work on the spots or prominences are few indeed.

Whether in the future it will be thought advisable for the Royal Observatory to enter into serious competition in inquiries of this description with the great "astrophysical" observatories of the Continent and of America—Potsdam, Meudon, the Lick, and the Yerkes—we cannot say. That would involve a very considerable departure from its original pro-



the courtvard, showing bradley's transit room and the present one. (From a photograph by Mr. E. Walter Maunder.)

their appearance from time to time, and especially when sunspots were increasing in number or were at their greatest development.

A DETERIORATING ATMOSPHERE.

The prominence work had also to be dropped, partly for the same reason, but chiefly because the atmospheric conditions at Greenwich are not suitable for these delicate astrophysical researches. When the Observatory was founded "in the golden days" of Charles II, Greenwich was a little country town far enough removed from the great capital, and no interference from its smoke and dust had to be feared or was dreamt of. Now the "great wen," as Cobbett called it, has spread far around and beyond it,

gramme, and probably also a departure from its original site. For the conditions at Greenwich tend to become steadily less favourable for such work, and it would most probably be found that full efficiency could only be secured by setting up a branch or branches far from the monster town.

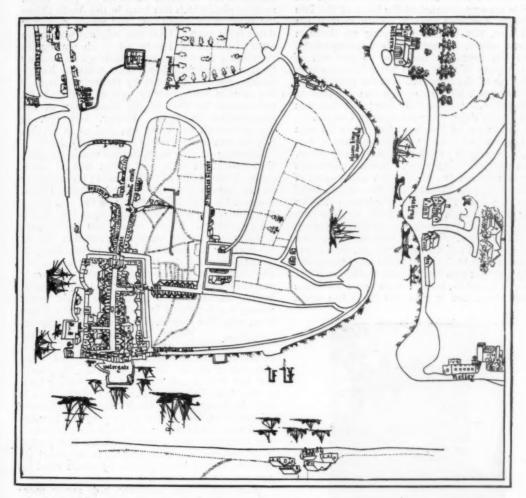
With the older work it is otherwise. So long as Greenwich Park and Blackheath are kept—as it is to be hoped they always will be—sacred from the invasion of the builder; so long as no new railways burrow their tunnels in the neighbourhood of the Observatory; so long the fundamental duties laid upon Flamsteed, "of Rectifying the Tables of the Motions of the Heavens and the Places of the Fixed Stars," will be carried out by his successors on Flamsteed Hill.

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SOUTHAMPTON.



THE good folks of Southampton are about to issue a guide book as a municipal speculation. They have noticed with increasing dismay that people arrive in the docks from everywhere, and as soon as they land on the quays get into the train and are off out of the town as soon as possible. "They go all over England," said the President of the Chamber of Commerce at the annual meeting, "searching for antiquities and various historical reminiscences connected with the Anglo-Saxon race, paying no attention whatever to Southampton and its neighbourhood—the very cradle of that race!"

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There is certainly room for the guide book, as also for a map of reasonable size, though the Ordnance Survey ought to have made Southampton the best mapped place in existence.

Both book and map will be for the town's good, as intended, and the book will be more welcome if some of the local legends are just a little qualified, and a few of the identifications toned down a trifle. Canute's palace, for instance, would be wiped out at once by a reference to the passage in which Englefield first mentioned its name.

Canute is much to the fore hereabouts. No mention of Southampton would pass muster without an allusion to the well-worn story of his courtiers and the tide that would not obey him. How a lot of seafaring men, such as these courtiers must have been, could have laid themselves open to rebuke on the subject is difficult to imagine; but probably the story as we have it, if there be any truth in it at all, is a mutilated version by Henry of

Huntingdon, or some other landsman of a monk, of an old story with a similar moral which in some way referred to the peculiarities

of the local tide.

Southampton, like Colombo, has four tides a day, and for a similar reason; and to its double tides it owes much of its prosperity. As the tide runs up channel at the back of the Isle of Wight, the first branch comes in through the Solent, the second sweeping up through Spithead about a couple of hours afterwards, before the first has had time to get out of Southampton Water. The latter is necessarily the higher of the two, and it is the main tide—before the sea broke through the channel at the Needles it was the only tide; but that was in very early days, long previous to Canute.

Canute was at Southampton when he was told that he had been chosen king, and it was then, as for long afterwards, a thriving place, as the port of Winchester. Some antiquaries assign its origin to the Roman settlement of Clausentum, but Clausentum was at the bend of the Itchen at Bitterne manor house, the site being cut through by the road to Northam Bridge, where the hedge contains so much butcher's broom. The old Saxon town, said to be on the site of a British village, was lower down on the opposite bank in the neighbourhood of the present gas works and workhouse. It began as Hamtun, and as such gave its name to the shire, but it was not until the tenth



THE WEST GATE.

century that it was called Southampton, to distinguish it especially from its Mercian namesake when Wessex conquered Mercia. About Canute's time the town began to extend to the west, across the peninsula, to the bank of the Test; and it was around this western extension that the walls were built.

Of the size of old Southampton it will be enough to say that the area of the land within its walls was less than that of the water in its present dock basins. The small space it occupied is shown in the facsimile herewith of part of an ancient plan which has been in the Audit Office for some three centuries, and which probably dates from 1550. That the original was made after the days of Henry VII is shown by its containing the conventual buildings erected by him, while the fact that it also contains Netley Castle, which was built by Henry VIII out of the ruins of Netley Abbey, proves its date to be subsequent to that of the dissolution of the monasteries in 1535. Netley, however, is brought much too close up, and so is Hythe, but the peninsula itself is not so badly done.

Looking at this map, no one would imagine that the whole area, and about half as much again, is now covered with houses; for, singular to say, the docks are all on land reclaimed from the sea, the dock offices being on the site where the sailors are shown hanging from the Admiralty gallows. From where the water-gate appears, the town quay now extends for at least as far as the main street to the Bargate is long, and for double that length and more the docks run out from the south-east corner near God's House Gate, to form a long triangle, having the other end of its base at the point where the ferryman is seen waiting for a fare from what the map-maker gives us as Ytchyng.

When these walls were first built, no one really knows, but it is not difficult to make out the age of what remains of them. At the east side, they have left but few traces, the east gate having been pulled down in 1761; but on the north there is still the Bargate—the most conspicuous feature of Southampton as you enter it by the London road that leads under the long avenue across the common and down between the parks. Southampton is not unhappy in its approach by railway, but in its approach by coach road no town is more favoured.

And there are certainly not many more pleasing High Streets than that in which the grey old Bargate blocks the way. In the centre of the narrow gateway is a Norman arch, which cannot be much later than the Conquest, and around this has been added work of almost every architectural age, including the comparatively modern, as instanced by the feeble statue of George III as a Roman general, which looks so uncomfortable on its southern side. Small as the Bargate may appear, it has the Guild Hall over the arch, in which there are two courts of justice decorated with a few paintings of little merit, including the imaginary portraits of the knight and his giant squire, whose exploits form such wearisome reading in "Sir Bevis of Hamptonne."

Some two hundred yards to the west is the north-western corner tower, still prominent, and extending south from this along the western spi bel wh his ma the

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far so its So and shore is a range of wall that it is a pity cannot be kept unbroken. Picturesque it all is, particularly in one section where the very old masonry has been strengthened by a series of arches varied in size and proportions, and forming an ivy-clad arcade leading on to the west gate, through which the road rises as it did when the men-at-arms and archers passed that way to embark for France, under Ed-

ward III. For Southampton was the trooping port then, as it was under

Henry v, and as it is now.

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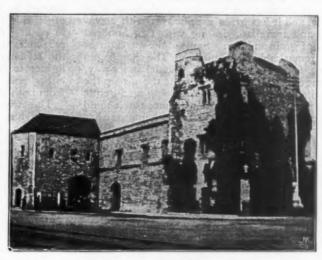
Following the curve of the shore another interesting group clusters about the South Gate, where in the Domus Dei, or God's House, founded by Gervase in the twelfth century, is one of the oldest hospitals in England. Within the walls on the western side are many relics of the past, mostly parts of houses, some of them dating back to Norman and Plantagenet days. As the chief port for Normandy nearly all our old monarchs visited it at some time or King John was there no less than fifteen times, and has a house named after him. Henry VIII, too, has given his name to a house in the same neighbourhood which looks out on to the west front of St. Michael's, the town's oldest church, whose unchamfered arches date it

back to the Conqueror, and whose lofty spire is conspicuous from every point of view. Within a stone's throw is another prominent spire with a ship for a weather-vane. This belongs to the church of the Holy Rood, where Philip of Spain returned thanks for his safe landing in England, on his way to marry Queen Mary at Winchester. In short, the old town is rich in historical associations, and is as well known to the archæologist as to the yachtsman; and arriving at the west station, as most people do, you may be in it for hours without noticing that it had such a thing as docks.

And yet it is for its docks that most The Docks. people know it, and that it chiefly desires to be known. To begin with, Southampton Water is one of the best of harbours. The largest ships can enter and leave it at all times of the tide; it is quite land-locked; its approaches are so protected that no sea of any consequence can rise; and the anchorage is good. There can be no comparison between it and the Mersey or the Humber. The Isle of Wight is a natural breakwater, and the open sea is far off; Hurst Castle is twenty-two miles away, the Foreland, in the other direction, is nearly twenty, and whatever may take place between them sweeps by Calshot and comes no farther up the estuary. So free is it from storm, so ample is its fairway, and so convenient are its tides, that it has come to be recognised that Southampton does not want basins, but quays and jetties and graving docks; it does not

want shelters from rough weather, but conveniences for landing, as the conditions are never too bad for vessels, however large, to load and unload along the river front.

It never appeared to greater advantage than on the occasion of the Naval Review during the Diamond Jubilee. Some of the largest steamers from the other ports of the kingdom – there were over thirty in all—on that day made



SOUTH GATE AND OLD JAIL.

it their headquarters, and found that they could load or discharge at any hour of the day or night. The Campania, for instance, had her berth on the river front just outside the entrance to the Empress Dock, and from it her passengers walked on board in the morning, to it she brought them back after the review, and from it she went out again at night to see the illuminations.

Another thing in Southampton's favour is its position in the middle of the south coast of England, whence it can be reached from all parts, east and west and north, it being only 78 miles from London, 129 from Aberdare, and about the same from the manufacturing districts

of the Midlands.

Its main feature is its nearness to London. Once goods have to be run up by railway they might just as well be run from Southampton as from Tilbury, especially as there is the saving of time over what they would take if brought round by sea. Thus it is that Southampton is becoming practically an outport of London, and sends on to it about 75 per cent. of the goods it receives. It is not the heavy goods that Southampton gets, the goods with which a day more or less is of no importance, but the light goods, the mail goods-that is to say, those that come by the fast steamers, require quick despatch, and with which every hour is an object. A trade like this has to be dealt with quickly and surely, and requires good appliances—and it has them. In the docks, running on all the quays and along and into

the sheds and warehouses are twenty miles of railway, with any number of switches and turntables; cranes, hoists, and capstans, driven by hydraulic, seem to be in every place they are wanted; and the electric light is everywhere and rather more brilliantly in evidence than usual.

Southampton, however, is not content with merely a first-class transit trade. It has warehouses, bonded and free, for merchandise of all sorts, and it has grain warehouses with elevators and travellers dealing with two hundred tons of grain an hour. Some of the warehouses are remarkably light and dry. The champagne store, for instance, is quite a model in its way, a huge fan at one end driving the air up the ventilators in the floor and keeping up a gentle breeze all the time, so that no moisture should linger round the cases. Southampton has always been a great wine port; in the past, it



HENRY VIII'S PALACE

had a monopoly of all the Canary and all the Mediterranean wines, and it now receives more champagne than any other place, most of it coming, of course, through Havre. The wines and spirits that reach it in a year are worth over a quarter of a million, and of this a fifth are sweetened spirits, principally chartreuse, of which it is the headquarters for the English-speaking countries. Looking at the stock of chartreuse in bond, case after case of it, hundreds of cases of it, yellow and green, it seems as though its manufacture must give employment to quite an army of monks, who ought to be making their fortunes.

One interesting thing at Southampton is the way in which the coaling is managed. In the northern corner is a dock devoted to coal barges, in which the barges are loaded from the screw colliers that bring the steam coal from South Wales. There is a narrow jetty along the river front on which are four hydraulic weighing cranes; on the river side the collier is moored, and the coal is hoisted out of her, and swung

down into the lighters in the dock. There is no storage of the coal ashore; sometimes railway trucks are loaded from the collier to be distributed locally, sometimes the coal comes direct by railway alongside the ship; but the only storage is in the lighters, so that it is ready for use at any time, and has only to be towed alongside. So convenient has this plan been found that another coal-barge dock has been started by the company at Wolston on the other side of the Itchen. Another good idea in coaling practice, here in vogue, is that of recessing the quay wall in places so that while the steamer is alongside there is room for a lighter to come between her and the quay at either end, thus allowing of her being coaled from both sides at once.

The whole of the dock area, land and water, has, as we have seen, been won from the river, the two older docks having been

made about fifty years ago. To the south of the inner dock, among other buildings, is a little brick office which was built by the contractors on the very edge of the old shore before the recent extension was commenced. Beyond this there is now a gridiron of sorting sidings and the Empress Dock and the big graving dock, and the Itchen quay beyond. It seems almost incredible that so much should have been done in so few years. The Empress Dock is of over eighteen acres, and has a minimum depth of twenty-six feet and an entrance 165 feet wide, and is surrounded with cargo sheds and railway lines; and the dry dock, said to be the largest graving dock in the world, is 750 feet long and 112 feet wide at the coping, a huge cavity in which the men are dwarfed to half their size and in which-important to notethe men work in the dry, owing to the constructor having had the wit to make it turtlebacked and thus drain the water off at the sides instead of in the middle in the old way.

And then there is the engine house of this dock, with centrifugal pumps a yard in diameter to clear it of water in a couple of hours; and beyond it are sheds built and building along the Itchen wall, while the return wall, five hundred yards in length, along the Test, is well advanced, the trucks still bringing down their loads of chalk from Micheldever for filling in.

Man is generally pooh-poohed as a geological agent, but assuredly he will leave his mark here. He must have been in the neighbourhood for a considerable time. The placid estuary with the winding rivers leading in was just the sort of shelter to suit the small craft of the past, and has never lost its attractions for the trader. A noteworthy fact regarding it is that from early in the thirteenth century until 1532 the Venetian trading fleet came to it every year. In the thirteenth century, Southampton was the principal market for linens and woollens, and in the fourteenth century its wool trade went ahead encouragingly, owing to the new markets opened up in France and Spain. In Elizabeth's

time, when Alva drove the Protestants from the Netherlands, many of them settled here and began the manufacture of cloth. It was to these fugitives that the chapel of the Domus Dei was given as a place of worship, and the service in French is held therein to this day, though the form has been altered somewhat, and now consists of the Church of England

liturgy in a French translation.

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The High Street used to be English Street, and the one parallel to it is still French Street. In French Street, by the way, is the birthplace of Doctor Isaac Watts, the religious poet of the Hymns and Divine and Moral Songs. The house is easily recognisable by its being set back. Along the forecourt wall are six lime-trees, generally described as poplars—a true case of erratum populi. In one of the parks is a statue to Watts in clerical robes, which hardly does him His father was imprisoned for contumacy in the gaol at the south gate-that is, God's House Gate—and it is said that the wife and little Isaac used to sit at the foot of the wall every day to talk with the prisoner through the cell window. Near where they sat is a terracotta statue of the Prince Consort, almost lost against the ivy, and opposite is the gun platform, with a few ancient pieces threatening the mouth of the Test, or rather the gap between the docks and the town quay.

The quay belongs to the Harbour Board, and is over a quarter of a mile long, fitted with lines of rail and sheds and cranes as if it were in the docks. It is mostly used by vessels under a thousand tons, though it has berthed some drawing over twenty feet of water. Farther round is the pier, the largest on the south coast, where the Isle of Wight boats start from, and along which the railway carriages are hauled by diminutive engines, for Southampton has really four railway stations—the town, the

docks, the pier, and west.

The trade of the port was always miscellaneous, and it is now more so than ever. Since the South-Western Railway Company took over the docks it has yearly increased. In 1893 the net tonnage going into the docks was 1,437,000; in 1897 it was 2,262,000, or an increase of 57 per cent. In 1893 the gross tonnage was 2,825,000; in 1897 it was 4,403,000, being an increase of 55 per cent. In 1893 the coal brought into the dock by water was 259,000 tons; in 1897 it was 389,000 tons, or an increase of 50 per cent. Comparing this with the increase of net tonnage, it shows that by improvements in machinery and boilers the ships were being worked at less consumption of fuel. Last year the inward cargoes amounted to 424,000 tons as against 320,000 tons five years ago, while the outward cargoes, which in 1893 amounted to 233,000, in 1897 reached Thus Southampton increases its ini-332,000. ports at the rate of 28 per cent., and its exports at the rate of 42 per cent., which is a reverse to what most other ports are doing. In 1893

the passengers passing in and out of the port numbered 154,000; in 1897 they numbered 203,817. Thus every week there pass through Southampton 4,000 passengers and 14,000 tons

of cargo.

In 1893 the vessels entering and clearing from the port amounted, according to the Board of Trade returns, to 10,549; in 1894 this rose to 11,338; in 1895 to 11,604; in 1896 to 12,140, and in 1897 to 12,297. This is indeed steady progress, though it is curious that there has been little increase in the number of places with which the trade is carried on. Of the 1,400,000 tons of shipping that cleared from it last year just over a million went to foreign countries, and of this 318,000 went to the United States, 291,000 to France, and about 100,000 each to Java, Brazil, and Germany. To Natal went 193,000, and to the Channel Islands 108,000. The Channel Islands accounted for 96,000 out of 1,574,000 tons entered. Theirs is a peculiar and healthy trade, most of it in market produce, and a good deal of it is potatoes, though this year more potatoes have come from St. Malo than St. Helier's. Much of the other topnages mentioned are made up by the big ocean liners, such as the American, the Union, and the Royal Mail, that make the port their headquarters, and the North German Lloyd, Hamburg-American, Castle, and other lines that use it as a port of call, and for whose use the new Itchen quay has been principally designed.

One prominent feature of South-Its Yachts. ampton Water remains to be mentioned, and that is its fleet of yachts. Southampton is the most convenient of yachting ports to the Londoner. Owing to its better train service he can reach it more quickly than he can Burnham or the Lower Thames, and he has a better cruising ground. In the number of yachtsmen about, and in the character of its shops, its High Street in summer time is like that of Cowes, only it is very much wider, and the stairs at the town quay are busy all day long with dinghies and cutters, which come in quite a crowd at night waiting for the London express, particularly at the week-end. way down to Hythe, the yachts are anchored in twos and threes, and occasionally in swarms, and a graceful foreground they make to the low green woods of the New Forest shore. Itchen Ferry has been a household word among yachtsmen for years; and there are few more interesting ways of spending an afternoon than by a leisurely cruise up the river to look at the numerous shipyards crowded with pleasure craft, small and large, building, repairing, or laid up.

In short, Southampton is a town of many attractions, and the most pleasure-like of our larger ports. But as a holiday haunt it is rather spoilt by the appearance of the western shore at low water, when it is only too obvious that

both tides have gone out together.

W. J. GORDON.



ELIZABETH BARRETT BROWNING, in that fine poem "A Vision of Poets," thus characterises the great Italian poet Torquato Tasso:

"Not without The wreath he died in, and the doubt He died by, Tasso, bard and lover, Whose visions were too thin to cover The face of a false woman over."

By the "false woman," the poetess undoubtedly referred to Leonora d'Este, sister of the Duke Alfonso d'Este, at whose court in Ferrara Tasso spent a large part of his unhappy life, and by whom he was imprisoned for seven years in the hospital of Sant' Anna, on the pretext that the poet was mad. It is not easy to say with certainty whether Leonora herself had any share in the unjust treatment which Tasso received at her brother's hands. The story will probably never be fully elucidated, and it is probable that there were faults on both sides, as is the case almost always in human quarrels. If it were not that this sad passage in Torquato's life influences his whole character to so profound an extent, posterity could well afford to follow his own advice concerning it, and to leave it in what he calls "that high, that profound, that sweet, that divine silence in which all injuries are hidden and forgotten; that marvellous silence, as superior to every harmony, and to every concert that the angels make when they praise their Creator, as the divine darkness is more luminous than the sun, the stars, and every other light that is in heaven. . . . I shall consider myself to have received that grace ('of peace') if only I am able, in the oblivion of this divine silence, to drown the memory of all the offences, preserving that of the benefits which I have received." Thus ends Tasso's dialogue, entitled "Peace," written in his later years, and such was the frame of mind with which he

could look back upon his past life—a truly noble and Christian temper.

Torquato Tasso, the fourth centenary of whose death has been lately celebrated in Italy, was born in Sorrento on March 11, 1544, and died in Rome on April 25, St. Mark's Day, 1595, being then but fifty-one years old. He came of a noble family of Bergamo, and his painstaking and accurate biographer, the Abbé Serassi, gives a long account of the origin of the family, which he pretends was allied to the great Austrian noble house of Thurn and Taxis. This family date back to the twelfth century, and took their rise in a little place, situated not more than five miles distant from Bergamo, on the river Brembo. About the year 1200, to avoid the wars which then particularly infested open and populated places, the family took up their abode in an Alpine region of the valley of the Brembo, called Cornello, and becoming in a short time lords and men of riches and power, descended about a century later to live in the city, whence they spread, one might almost say, in colonies, into diverse provinces of Europe.1 were not, however," says Serassi, descendants of Lamoral della Torre, who, in 1313, made himself Lord of Comello;" and because there was in the vicinity of that place a hill called the hill of Badgers (in Italian Tassi), this lord, being greatly devoted to the chase of those animals, was called from that circumstance Il Tasso. It is true there is a badger in the arms of the Tasso family, but they were established in Bergamo earlier than the period at which Lamoral della Torre lived at Comello. Still there is no doubt that the family was of ancient and noble origin. At the date of the publication of the second edition of Serassi's "Life of Tasso" there was a member of the family living at Bergamo, Cavaliere Ercole Tasso, to whom this second edition is dedicated. The 1 Serassi.

Abbé Pierantonio Serassi as a Bergamasque himself is very anxious that no one should be ignorant that the poet is of a Bergamasque family, although he was born while his father happened to be living in Sorrento.

Raphael's father was a painter, Tasso's father was a poet, and in both cases the sons followed

be written to order. Their public had to be consulted, like that of the present day, and was not less greedy of flattery and intolerant of what was not to its fancy than is now the case. Bernardo Tasso, who appears to have been a man of talent in more ways than one, accompanied his patron to the expedition which Charles v undertook against Tunis,

1534. In 1537 he was sent on a political mission to Spain, where he fell into the toils of the beautiful and cultivated Tullia d'Aragona, a lady whose life seems to have greatly resembled that of a Greek Hetaira. Having with some difficulty freed himself from this dangerous personage, Bernardo returned to Naples, where he soon after married a noble young lady, called Porzia de' Rossi, daughter of Giacomo de' Rossi, called "of Pistoja," he having had at one time the lordship of that city. Bernardo was at this time forty-six. His wife, according to Serassi, was "a most beautiful and well-conducted (costumatissima) young woman, who brought to him, besides her riches of most noble qualities, a dowry consisting of the sum-for those times not by any means inconsiderable-of five thousand ducats, and one thousand five hundred of insurance upon her life." It was this maternal fortune which, withheld by his uncles, caused Torquato Tasso so much worry and trouble in his later years. By this lady, whom he seems, in spite of the time he passed away from her, to have tenderly loved, Bernardo had a daughter Cornelia, a son named Torquato, who died in infancy, and our poet, in whom the name was repeated, and who was born at Sorrento. The first Torquato was born at Salerno, which gave rise to a mistake on the part of certain friars of

Salerno, who insisted that the great Torquato was born in their city, wherefore the marble inscription that was set up in Salerno in the house which Bernardo Tasso inhabited there is erroneous. There is no doubt that Torquato was born in Sorrento, where, his father writes to his cousin, the Cavaliere Tasso, a prelate in Rome, "he had retired, on account of its being quiet, and more healthy both for soul and body, than Salerno, where, moreover, he had experienced certain worries, owing to jealousies among his fellow courtiers."

Here, while his father was engaged upon the composition of his long poem "Amadis," "Porzia, in midst these poetical studies of her husband, in the greatest domestic quiet and content, became the mother of Torquato; such, and so perfectly, circumstances were adapted by divine providence in order to enrich the world.

so perfectly, circumstances were adapted by divine providence in order to enrich the world after many centuries with the noblest epic that had been written since Homer and Virgil."

Many cities have contended for the honour of



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TORQUATO TASSO.
(From an engraving by Raffaelle Morghen. After Pietro Ermini.)

the paternal calling. Bernardo Tasso, who was born at Bergamo in 1493, lost his father when a boy, and hence was brought up by an uncle, Luigi Tasso, bishop of Recanati, then living at Bergamo. In 1520 this bishop was murdered by brigands, and Bernardo left Bergamo and lived in several different towns of Upper Italy, gaining a reputation for talent in poetical composition. In 1529 he went for a short time to Ferrara. A volume of verses which he published at Venice in 1531 made him known to Ferrante Sanseverino, Prince of Salerno, who sent for him to Naples, and, after the fashion of the day, gave him an allowance, with liberty to withdraw from his Court from time to time in order to study in retirement. This rage manifested by the great nobles of the fifteenth century for keeping near their persons such men as were distinguished for poetic talent, explains much of the unreality and mannerism that detracts from the merits of the work of mediæval writers, seeing how much had to

being the birthplace of Tasso: Sorrento, because of his nativity; Naples, on account of his mother and his education; Ferrara, as his dwelling-place for more than twenty years, and Bergamo, for his family and paternal origin. He himself seems always to have considered Bergamo as his true home, in spite of his affection for Sorrento and Ferrara. Two of his sonnets express this feeling eloquently. Bernardo was obliged to leave his wife before his son's birth, being forced to quit his beloved retirement and follow his patron to the wars, then newly broken out. He took pains before leaving home to name a godfather for his child -Don Ernando de Torres-who did not fail to repair to Sorrento to assist at the baptism of Torquato.

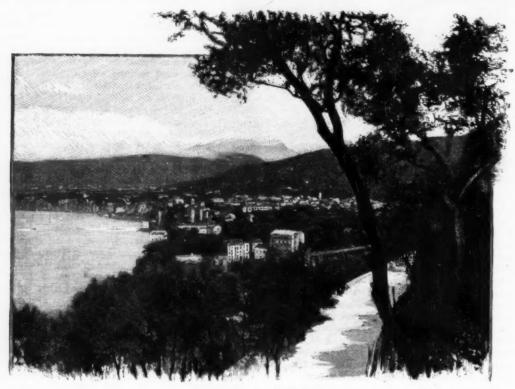
In January, 1545, Bernardo returned to Sorrento, and was delighted, like everyone else, with the beauty and intelligence of his infant son. But few bright days were in store for the little family. Bernardo, involved in the misfortunes of his patron Severino, was forced to take refuge with him in France. From this time forth ill-luck seemed to dog his steps. He passed from Court to Court, losing all his

husband. She died when Torquato was twelve years old. He had gone to be with his father in Rome some eighteen months before, and was not present when her death occurred. This death was sudden, and her husband accused her unnatural relations of poisoning her—but perhaps only worried her to death, which had the same effect.

Tasso's first extant letter is one to his mother's family demanding the custody of his sister Cornelia for his father. The Rossi refused their assent, and married her instead

to a gentleman named Lerale.

Torquato began to write poetry before he was eighteen. His first effort, as was but natural, shows the influence of Ariosto. He studied at Bologna and Padua. At the former University he got into rather an ugly scrape through inditing satirical verses. His "Rinaldo" made him famous throughout Italy, and three years after its publication he was called to Ferrara by Cardinal Luigi d'Este, to whom this poem had been dedicated, to fill Ariosto's vacant place. Probably his father, who had been in the suite of Renée of France, the mother of Duke Alfonso's two sisters Lucrezia



SORRENTO, WHERE TASSO WAS BORN.

property, and died in 1569 at Ostiglia, while in the service of Gonzaga, Duke of Mantua. Porzia was left to the tender mercies of her brothers, mercies that were cruel, for they refused to pay her dowry, and it was on this account that she had been unable to rejoin her and Leonora, was still remembered at Ferrara, and his son was not the less kindly received on this account. Torquato was at this time nearly twenty-two years old. He was, apparently, what we should now call the fashion. He was handsome, of noble birth, and obliging in the

matter of writing love songs in all forms, such as it was the custom of the young nobility of both sexes to present to each other, as well as odes and elegies and vers d'occasions. He naturally devoted himself, after the usages of chivalry, to the unmarried sister of the Duke. Leonora was at this time quite thirty years old, and of such a delicate constitution that her health prevented her from appearing at the rejoicings which celebrated her brother's second marriage, to Barbara of Austria, which took place at this time. Thus it happened that the poet saw her first in quieter and more meditative hours, in all the interesting languor of convalescence, and she appeared to him as something nobler, loftier, purer, than all the rest of the gay throng at Ferrara.

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"Wie den Bezauberten von Rausch und Wein Der Gottheit Nähe leicht und willig heilt, So war auch ich von aller Phantasie, Von jeder Sucht, von jedem falschen Triebe Mit einem Blick in deinem Blick geheilt"

So Goethe in his drama makes Tasso describe the first impression the beautiful woman made on him. Leonora became his inspiration, the ideal of a poet's fancy. She probably understood him better than anyone else at the Court, and her womanly tact and intuition might have been his safeguard and salvation had not her womanly vanity worked in an entirely opposite direction. Doubtless this chivalrous devotion-"the desire of the moth for the star, of the night for the morrow"-of the handsome and admired young poet was agreeable to the princess, while her brother was at that moment in a holiday humour. The fact that his first wife, Lucrezia de'Medici, was said, not without cause, to have been secretly "removed" by her husband, was either not known to the young Torquato, or did not make a deep impression on him, seeing that it was but in accordance with the customs of the times. The disappearance of the first wife would hardly be a popular subject of discussion at the marriage feast of the second, and Torquato, in the poem he wrote for the occasion, naturally did not allude to it. To Torquato, Alfonso was all that a ruler and a patron can be-kind, sympathising, intelligent. The days went by without a cloud, and Torquato lived in a The Court of veritable fool's paradise. Ferrara, during the first part of Tasso's residence there, was a very dream of luxury and festivity to the poet, where all the splendour was displayed, and the romances were realised, of which he had dreamed, and where his poetic fancies were excited and fostered and his productions honoured and applauded. Jousts, masques, concerts, and literary debates, in which Duke and knights and ladies joined, whiled the days away, and hid from Tasso's inexperienced eyes the darker and meaner side of Court life. Alfonso seemed to him a perfect prince and model governor, and his Court the most desirable place in Italy; the envy and backbiting which inevitably follows a favourite

was unnoticed or unheeded by him. Young, accomplished, high in the Duke's favour, Tasso became naturally the object of the envy and the victim of the scandal-whispering tongues of the Court. This was his golden time. After all, poor fellow, he was but a boy, not yet twenty-two. Galileo has been called the first of the Moderns, and in a scientific sense he may have been; but from many points of view Tasso's temperament and genius has a strong affinity with the modern spirit. Not its latest form, perhaps; still he had the complex, introspective temper, sensitive to the opinion of the world, and prone to "ask questions," which is so much opposed to the simple, straightforward, practical temper of antiquity. Dante believed unquestioningly-for him black was black and white, white. His bad people were in Hell; his good people dwelt in Paradise, or in Purgatory, which is on the way to Paradise. Petrarch was an elegant pagan, and so were Ariosto and Boccaccio; but Tasso, even in his young days, was one who thought and felt deeply. His first communion, as he himself writes in a letter, was made under strong religious excitement. He received his instruction from Jesuit fathers who received him as a communicant when only nine years old, so well-grown and forward was he. His fervour in receiving the sacrament he speaks of in the most convincing The sisters of Alfonso were daughters of Renée of France. This unhappy princess had been converted to Protestantism by John Calvin himself at the time he passed through Ferrara in 1535. At first no rumour or suspicion of this conversion transpired, such was the secrecy with which Renée was able to conceal her change of belief; but it became known finally to Duke Hercules, her husband, who, with much hard language, forced his wife to conform to all the practices of Romanism. Despite which, in 1554, the lady, being unable longer to dissimulate, was by the zealous duke sent with all her suite back to France, and her daughters were conducted to the convent of the nuns of the Corpo di Cristo, where they received a strictly religious education. Renée had taken care that her daughters should be instructed in poetry, music, and "every other noble discipline that is fitting for a high and royal lady." The elder, Anna, was married to Duc François de Guise, and became one of the most brilliant ladies of the Court of France. Lucrezia and Leonora had no doubt been carefully guarded from the taint, as their father considered it, of heresy, but still they could not be ignorant that such a thing existed. By this date the days of implicit faith were over, the pagan Renaissance was giving way to the Christian Reformation. Probably it was the religious fervour which was in the air that had inspired Torquato with the idea of writing a Christian epic, on the lines of the Homeric and Virgilian heroic poems. The skill and success with which he carried out his intention proves that he had been rightly inspired. Alfonso was, after the fashion of the day, highly

delighted at the prospect of appearing before the world as the patron, and so to speak the literary godfather, of a poem which was eminently likely to be what the jargon of our day calls "epoch-making." It seems to modern ideas a strange position, both for prince and poet; but there is no doubt whatever that Alfonso was genuinely and intensely ambitious of the honour that Tasso should dedicate to him his epic, and was haunted by a jealous fear lest the coveted distinction might after all be conferred upon the Grand Duke of Tuscany, Francesco Medici, whom he hated. This was the ostensible cause at least of much of his inexplicable cruelty to the unfortunate poet. But these things were still in the future. For five years Tasso lived at Ferrara, surrounded by all that could make life pass brightly and easily. At the close of 1570, being about to attend Cardinal d'Este on a journey, he made his will. He provided carefully for the disposal of the beginning of his great poem, then called "Il Goffredo," after Godfrey of Bouillon its hero, the leader of the Christian host. The executor is referred in case of need to "the most excellent Lady Leonora." Lucretia had left Ferrara meantime, having married Francesco Maria della Rovere, Prince of Urbino. In this will there is a touching reference to the fact that as yet Torquato had been unable to erect a suitable monument to his father, and leaves a Latin inscription for one to be constructed "after payment of his debts." This desire he did not accomplish, as he laments years after, in a beautiful sonnet addressed to Cardinal Albano. Tasso remained in France about a year. Manso, who was a species of Boswell to Tasso, and to whom we are indebted for some delightful anecdotes, which he preserved, gives an epigrammatic dialogue between Tasso and King Charles which sounds rather apocry-In France Tasso was inconveniently zealous in his profession of the Roman Catholic faith, happening to be there at a time when, for political reasons, it was thought expedient not to be too hard upon the Huguenots. On this account he asked leave to return to Italy. He was met in Rome by the good news that Alfonso had made him one of his gentlemen in waiting, with a salary suited to the position. He reached Ferrara in May In September the good Duchess Barbara of Austria, who had always been his kind friend, died, bewailed by the poet in divers sorrowful poems. months later Tasso produced his play "Aminta," which became the rage immediately, and was followed by a host of imitations, one of which, the "Pastor Fido" of Guarini, is considered to have surpassed its model. The "Aminta" was a pastoral drama, in which Tasso is supposed, by some, to have portrayed his hopeless devotion to the Princess Leonora, under the disguise of the love of Amyntas for Sylvia. However this may be, he certainly spoke out more clearly in a speech written for a personage named Tirsi (Thyrsis), a pseudonym

for himself. Here we find compliments to Leonora, to Alfonso, and to the prime minister Pigna, whom Tasso celebrates under the name of *Espino*. Here, too, we find (if we may be permitted a conjecture) the "cloud like a man's hand" that was eventually to overshadow Tasso's future life, in the lines referring, under the name of Mopso, to Sperone, an old and valued friend of Tasso's father. Tasso evidently fell a victim to the weakness, so well known in our days as mania of persecution, and here is seen the first symptom. Sperone seems to have been a very strict and severe critic, and a person given to speaking his mind with no little freedom. This man had been a kind and useful friend both to Bernardo Tasso, and to Torquato in his earlier years. He had tried to dissuade Torquato from accepting service with the Cardinal d'Este, alleging, in support of his views, ideas with regard to the envy and calumny characteristic of courts, which were certainly confirmed by Tasso's subsequent history. He furtherand it was this that caused the exceedingly sensitive young author's wrath—had listened to certain cantos of the "Godfrey," then in progress, with such "malignant looks" that the poet under their influence became "hoarse, and like one who has been a wolf. The wolf was he." Sperone seems to have been at this time the only person who had ever addressed to the young and flattered poet anything like real criticism, and certainly it was not graceful in so young a man to allude in such terms, and in his absence, to one who had been his own and his father's friend. Tasso appears to have repented of his harsh expressions later on, but one cannot wonder that Sperone was estranged. He did not break with Tasso, however, for we find the poet frequenting his house during his stay in Rome, and writing a scolding letter because he did not return a manuscript which had been lent him. The unprecedented success, as it would be called in these days, of the "Aminta" soon brought about that envy and calumny against which Sperone had warned his young friend. Lucrezia, the sister of Alfonso, who had married the Duke of Urbino, insisted that Tasso must come to recite to her the "Aminta," at the performance of which she had been unable to be present. Tasso spent the whole summer, partly at Pesaro, partly at the Duke's country seat, Castel-Durante. Of course he could do no less than celebrate, in mellifluous strains, the charms and qualities of his hostess, who, he declares, is neither vanquished nor equalled by youthful beauteous dames, "though careless robed in all their rich array." Meanwhile, during his absence, whispering tongues had come between him and the Princess Leonora. Was she jealous of her sister? Was he jealous of Guarini-jealous as a poet, not as a lover? Who knows? In September 1573 Tasso wrote apologising for not writing sooner, offering a sonnet "not like those which your Excellency is daily receiving," hereby alluding to Pigna, who wrote verses, and to Guarini. Leonora, when the poet

returned, was certainly changed towards him, whatever might have been the cause. And now the confiding young man, who had hitherto basked in the sunshine of smiles and flattery, began to awake to a sense of the web of enmity and falsehood that surrounded him. Stung to the depths of his sensitive nature, he contemplated leaving Ferrara for Rome, but first, as in duty bound, he wished to finish his great poem and its dedication to his patron, Alfonso. And here, again, we notice what we should call Tasso's affinity with the modern spirit. Highly sensitive to the opinion of others, and wanting in the self-confidence of the poets who had preceded him, he submitted his work to the censorship of certain learned friends (or

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mind at rest about its dedication. Tasso, however, grew yet more capricious and discontented day by day, while his distrust of those around him increased, and not without cause. At the instance of Scipione Gonzaga, one of his critics, he paid a visit to Rome, passing through Florence on his return. Nothing could have been more ill-advised, for Alfonso, as was but natural, when one remembers the story of his first wife, was jealous above all of the Medici. The Grand Duke, apparently, did not appreciate Tasso very highly, though the poet celebrated the virtues of Casa Medici and the gifts and charms of Bianca Capello the Grand Duchess, in one of his best known dialogues. After this he went back to Ferrara, and met, during the



THE CASTLE D'ESTE, FERRARA, THE SEAT OF THE DUKE OF FERRARA, WHERE TASSO WROTE THE GREATER PART OF "JERUSALEM DELIVERED."

enemies), with results, to one of his nervous and high-strung temperament, which were nothing short of disastrous. The year 1574 and the early part of 1575 were spent in finishing the great epic, now styled not "Godfrey" but "Jerusalem Delivered." Continual correspondence took place-now on one point, now on another. One critic takes exception to the want of unity, another to the prominence of this or that character; one to this phrase, another to that. The poet disputes manfully sometimes, sometimes yields with a good grace, sometimes loses his temper and fairly scolds. It was enough to unsettle a stronger head than that of poor Torquato. Lucrezia, who had now returned to Ferrara to live, was his kind friend at this time, warning him of the danger of delay in completing his poem, and setting Alfonso's

carnival of 1576, another Leonora, a younger Leonora-Leonora Sanvitale, Countess of Scan-To this lovely personage Tasso indited sonnets which, as was but natural, made the first Leonora, now, alas! descending into the vale of years, excessively angry. She betrayed this temper in a set of annotations to a sonnet addressed to her in the hope of appeasing her wrath. However, after relieving her feelings in this way, she seems to have forgiven the poet, and to have continued to assist him. following July, in her suite, she took him to her villa at Consandoli. Tasso meanwhile had lost patience with his critics, and determined to follow his own judgment, as he had better have done at first. But his temper grew more and more uncertain. Now he was in the highest spirits, now in the depths of despair. In the

interim Pigna had died, and Torquato obtained his post of historiographer to the house of Este, and good-naturedly tried to do something to help Sperone, a task requiring, he says, "great dexterity." But now a terrible misfortune overtook him. During his absence, while spending Easter at Modena, a false friend tampered with his locks and rifled his papers, and certain verses were submitted to the Duke as proving Tasso's passion for the Princess Leonora-an unpardonable insult; when, in reality, they had been addressed to another and far meaner lady, the light fancy of a moment. The assertion that there was any actual lovestory between the Princess and the poet is unfounded, and highly improbable from the lady's character and position; but that he adored her, and made himself miserable with his misplaced and hopeless love, there can be no doubt.

She did not love him, consciously, that is, though perhaps she cared more for him than she was aware of; but she was flattered by the homage of the great poet, who was an ornament to her brother's Court; he was an interest and an occupation for her in the quiet life her health and studious inclinations caused her to lead, and if she was his friend and adviser, she claimed her reward in seeking to attach him exclusively to herself, and a stray sonnet or passing attentions addressed to another, and perhaps younger woman, roused her jealousy and momentary resentment. But the Princess was, nevertheless, perhaps the best friend he had, though he accused her afterwards of deceiving him by half-expressed promises, and of luring him back to Ferrara when he had broken loose from the life that had grown too difficult for him. Perhaps the Princess was not altogether free from blame; Goethe makes her, to a certain extent, encourage his passion, and her vanity may have led her farther than she intended. In any case, these verses were the beginning of great troubles, and worse was to follow. Tasso, in consequence of all this tittletattle, was attacked in the palace by a certain Maddalo, who, after the deed, flew to the protection of Alfonso's own ambassador in Florence, and was neither pursued nor brought to justice. The unhappy poet thus became convinced that he was indeed friendless and helpless, and in the midst of enemies and To add to his distress, an imperfect copy of his epic was printed without his leave. Alfonso wrote in his behalf to the various sovereigns of Italy to stay the publication of this work. This act once again filled him with gratitude to the Duke, and in consequence he abandoned for the moment his idea of leaving Ferrara. But thronging fancies dogged and tormented him. He fancied one person meant to denounce him to the Inquisition; he drew a knife in the Duchess Lucrezia's apartment upon a servant, who had, he said, been hired to poison him; and did yet other wild deeds. This caused him to be sent for some time to Belriguardo, one of Alfonso's country seats, hoping that rest would cure him. In vain; he

would adhere to no rules either of life or living, and then abused the doctors for not being able to dispel his disorders. Alfonso recalled him, but his mind was evidently unhinged, and a dread of a prosecution for heresy was one of his fixed ideas. An acquittal, which had been pronounced by the Inquisitor at Ferrara, he insisted upon considering invalid, and he begged to be tried at Rome. Then the notion took him to become a monk. At last, in July 1577, he fled to Sorrento to seek out his only sister, Cornelia Serale, now a widow. All the world knows the harrowing story of his flight; his terror lest he should be arrested on account of his own and his father's outlawry, years and years ago; his meeting with his loving and faithful sister and her children. But he would not stay. He could not remain away from Ferrara, the scene of his sweetest and bitterest days. At Rome he was warned not to go thither, but go he would, and did. At first he was well, perhaps too well, received, but a change soon came: Alfonso confided his manuscript to other hands, and when he remonstrated he was ostracised from Court. Once more he departed, going this time to Mantua, thence to Padua, and afterwards to Venice, whence the Tuscan ambassador wrote that he seemed "more unhappy than insane, and would be glad to live and work at Florence under the Grand Duke's protection." But Francis "did not wish for a lunatic at his Court," as he expressed it. From Venice Tasso went to Pesaro, where he composed a long justification of his conduct, which only helped yet further to exasperate Alfonso. From Pesaro he passed into Piedmont, where he seems for a while to have been comparatively at peace. But Cardinal Albano at Rome, deceived by some other person, advised him to return to Ferrara, where Alfonso was about to contract a third marriage, with a Mantuan princess, Margaret Gonzaga. Tasso composed an ode in her honour, and set out for Ferrara, where he arrived on February 21, 1579. But his ode was not produced, and he found the Duke much set against him. Here, perhaps, we may seek the cause in Leonora's treachery. Tasso had been writing verses to some fair lady at Turin, and Leonora, sooner than have him celebrating other charms, was willing he should be treated as a madman. Tasso, now losing all patience, flew into a rage, and spoke publicly and violently against the Ducal family for the cool reception of his verses on the occa-sion of Alfonso's third marriage. The Duke were now roused to action, and believing, or affecting to believe, that he was out of his mind, had him confined in the hospital of Sant' Anna, the madhouse of Ferrara. Poor unhappy Tasso! The freedom and luxury of a palace were exchanged for worse than a prison, and the company of his divinity for that of jailors who were none too kind. There may have been some excuse for putting him into the madhouse, but there was absolutely none for keeping him there, for his behaviour was of the sanest, and he still continued to write with

all his wonted power and sweetness. Moreover, Alfonso provided him with neither doctor nor priest, as, had he really thought him mad, he would have done; and thus, for seven years, the unhappy poet was imprisoned, while his great poem was published (with the Duke's name in the dedication; that was all he cared about). While his fame increased and his name was in all mouths no one troubled to ask after the man or minded that he was a prisoner. In this place Tasso was for two years a close prisoner, afterwards he was more leniently treated, and once he was even brought out to spend the day with Lucrezia and her ladies. Alfonso, in the meanwhile, had secured his dedication, and seems almost to have forgotten the writer of the poem he prized so much. It is probable that he really did consider him insane, but still able, through his great talents, to be dangerous under the protection of another prince. It is hardly likely that the love-poems, which are said to have aroused Alfonso's fury, were addressed to the Princess Leonora, nor, were this the case, would it have been an adequate cause for Alfonso's severity. Evidently he feared that Tasso might harm him if at large, and determined to keep him shut up. Lucrezia, too, believed it best to hold him in durance: certainly Tasso's was a difficult character to For three centuries Duke Alfonso has been looked upon as a tyrant and oppressor; but it must be remembered that his kindness and patience had endured for many years. Tasso's suspicious, morbid, imaginative nature made him see an enemy in every man, and a hidden injury in every proffered act of friend-ship. The Duke of Ferrara not unnaturally took umbrage at the poet's ingratitude, and distrusted him. Tasso was not mad, but he was often in that state of nervous exaltation which is on the borderland of madness. He was always complaining, being taken back into favour, and offending again. at last he was liberated much had changed. Leonora had died while he was in prison, leaving behind her a high character for wisdom and sanctity, greatly bewailed both in prose and verse at the time of her death, and puzzled over for centuries since, as she probably always will be. But Tasso wrote no poem on her death. He was silent then; but he wrote one lovely sonnet to her in after-years.

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While in prison the poet still wrote verses "by request," but the greater part of his time was spent in writing letters to procure his release. The religious bent of his mind was increased by suffering and imprisonment. He maintained that he saw a vision of the Virgin, "perhaps a fantasy, perhaps a miracle." This was in 1585. The next summer beheld Tasso at liberty, the Pope, the city of Bergamo, and numberless great personages having interceded in his favour. He was then forty-two, nearly twenty-one years of his life having been spent in the service of the house of Este. He was free but unforgiven. Alfonso would not see him before he left Ferrara. This

anger gives some colour to a hypothesis put forward by Professor de Gubernatis during the Tasso festival, but for which, however, he has no authority, that Tasso's real offence was the disclosing of some State secret; and that Alfonso made a pretext of the minor cause in order not to reveal the major. Whether the truth will ever be known about this disputed point is doubtful. It will only be should fresh documents turn up, an event by no means impossible in Italy, where many State papers and archives have only recently been opened for the examination of students. After Tasso departed he went to the Court of the Duke of Mantua, where he found a third Leonora, a Tuscan Princess, the young wife of Prince Vicenzo Gonzaga. His first task at Mantua was the completion of his father's poem, "Floridante," a continuation of the "Amadis." Here, too, to please a Princess, he finished his tragedy "Gulealto, King of Norway," which he now called "Torrismondo." In the second year of his freedom he made a visit to Bergamo, where he was treated by his friends and kinsmen with great distinction. Then the old Duke of Mantua died, and the young one was engrossed by cares of State. Tasso asked to be allowed to make a pilgrimage to Loreto, where he took the sacrament with great compunction for his youthful transgressions. Thence he went to Rome, whence, driven by the restless demon which seemed to have gained possession of him, he went to Naples. His sister was dead, and he here undertook the lawsuit with his mother's family which so embittered his last years. It was here he met his faithful friend and biographer, Manso, Marchese della Villa and Lord of Bisaccio. To this kind and sympathizing listener Tasso recounted the history of the "friendly spirit," by which he declared he was haunted, and with whom he "entered into the profoundest reasonings." From Naples, Tasso returned to Rome. But Sixtus did not, as he had hoped, offer him apartments in the Vatican, indeed, he did not receive him until the following July. Gonzaga, too, now a Cardinal, was less friendly, or Tasso thought so. His lawsuit dragged, he was a prey to bitter melancholy, he was, or fancied he was, turned out of Gonzaga's house. Instead, he went to the Bergamesque hospital, thence to Florence when he was better, where he had a pleasant visit, the new Grand Duke being kind to him. After this his life was ever more and more restless-he was now here, now there, always poor, always ill, and this life went on until he returned to Rome to die. seems to have been happiest in Naples, where he re-wrote his great epic under the title of "Jerusalem Conquered." It was not improved by this re-writing, and it is the "Jerusalem Delivered," as it first stood, which is the delight of all Italians, from prince to peasant, to this day, which is played in the giostri in the mountains of Modena and Pistoja, and once was sung in alternate strophes by the Venetian gondoliers. In Naples, Tasso also wrote a

poem on the "Creation" at the instance of Manso's mother. From Naples he was called to Rome to receive the laurel crown at the Capitol. Pope Clement also assigned to him a pension of a hundred ducats. "At evening time it was light," for him. Only Alfonso was inexorable, and showed no sign of forgivenesshad no tear for him for whom countless thousands have wept. Tasso, as all the world knows, never absolutely received the laurel crown. He reached Rome in November 1594, and his own weakness, and the illness of his friend Cardinal Aldobrandini, caused the postponement of the ceremony. On April 1, Tasso, feeling that his end was near, requested to be taken to the convent of Sant' Onofrio. His reception by the friars was very touching. Here the poet wrote one more letter, his last, to his hastened to obtain for him the Papal blessing, which he received with much humility and devotion, saying that "this was the car upon which he hoped to be crowned, not with laurels a poet in the Capitol, but with glory, as a blessed soul in heaven." He wished that his poems might be burned, and the Cardinal "let him believe" that it should be done. He lived until the morning of the 25th, "when clasping the Crucifix he began to utter the phrase 'Into Thy hands, O Lord'-but not being able to complete it he finished, at about eleven o'clock, the glorious course of his mortal life to begin the immortal life, as we may hope, in the eternal glory of the Heavenly Jerusalem." Crowned with the wreath of laurel his living brow had never worn, he was laid to rest beneath the payement of the Church of Sant' Onofrio, where



UNDER THE OAK IN THE CONVENT GARDEN THE POET USED, TRADITION RELATES, TO RETIRE FOR MEDITATION AND STUDY. IT WAS PARTLY BLOWN DOWN IN THE STORM OF 1843, BUT NUMEROUS BRANCHES HAVE GROWN FROM THE PART SPARED.

faithful friend, Antonio Costantini, a letter which, as Serassi says, "cannot be read without arousing a thousand diverse movements of indignation, of wrath, of compassion, of love, and of esteem for a man so great, and so little recognised by the age in which he lived." "I have caused myself," the poet writes, "to be brought to this monastery of Sant' Onofrio, not only because the air is more praised by physicians than that of any other part of Rome, but, as it were, to begin from this noble place, and with the conversation of these devout fathers, my conversation in heaven. Pray God for me-and be assured that as I have loved and honoured you always in this present life, so I shall do for you, in the other truer life, all that belongs not to feigned but to real charity; and to the Divine Grace I commend you and myself." Hearing that the physicians had no hope for Tasso, his friend Cardinal Aldobrandini

he died. Quite recently a finely carved and sculptured marble monument has been erected here to his memory.

In April three years ago all Italy celebrated his memory, and he is for Italians still the poet of their choice. But all the late remorse of love cannot avail to cancel the sad impression caused by the tale of his mournful life. Sorrento, especially, exerted itself on his behalf. Two commemorative tablets were placed, one on the house in which Tasso was born, and the other on that lived in by his sister Cornelia. The Tasso house stood on the site now occupied by the Albergo Tramontana. Each bears appropriate inscriptions. Neither of the houses is any longer what it was; in that of Tasso's sister, his nephew, a great admirer of his uncle's genius, had erected in the garden, in accordance with the taste of his day, a number of memorials in the shape of loggia, little temples, porticos, inscriptions, etc. Of these, however, only a few broken fragments remain. The Archbishop, classing Tasso as a Christian poet, ordered a Mass and a Te Deum to be sung in his honour, and also caused a tablet to be placed in the Cathedral to the memory of the unfortunate bard.

The Latin inscription runs thus:

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VII KAL. MAJAS A. R. S. MDCCCXCV
TERCENTESIMO VERTENTE ANNO
EX QUO
TORQUATUS TASSO
DECRETAM TRIUMPHI LAURUM
IMMORTALITATIS CORONA COMMUTAVIT

HIC
UBI BAPTISMA SUSCEPIT FIDEI
CUJUS AFFLATU

ITALAS MUSAS AD NOVUM DECUS EREXIT
EPICI CHRISTIANI CARMINIS PARENS
JOSEPH GIUSTINIANI ARCHIEPISCOPUS
UNANIMI CLERI POPULIQUE PLAUSU
QUI TANTO CIVE GLORIANTUR
MEMORIAM NULLO AETATUM
FLEXU INTERITURAM
MARMORE CONCREDIDIT.

Round the figure of Tasso so many stories have been woven, his life has been related in such contradictory terms, discussed, distorted, his character judged and misjudged by such a host of critics and commentators, that a dozen different conceptions of him exist. His genius, his unhappy love, his unjust fate at the hands of the Duke of Ferrara, have thrown over him that halo of romance and melancholy that seems popularly to belong to a poet; but how far his misfortunes were due to outside circumstances, and how far brought about by his own difficult temperament, is a question on which most of his biographers disagree. The varied fortunes of his childhood, and his early acquaintance with trouble, fostered his disposition to those alternate moods of ecstatic joy and dark despair which made peaceful intercourse with the self-restrained and calculating courtiers, amongst whom the greater part of his life was spent, a difficult, and at last an impossible task. In these later days Tasso would have been looked upon as hypersensitive, nervous, highly strung; and his vagaries might have been controlled by judicious surveillance, or excused on the ground of the irresponsibility of genius. In his own time he was pronounced mad, or his enemies found it convenient to think him so, and he was shut up in the prime of his life in the living tomb of a lunatic asylum. Truthful in an age when a flattering lie was expected and approved; moral, compared with the immorality of his time—he was out of touch with his surroundings. His natural character made his trouble doubly hard to him; but his was the nature of the poet, and if his faults were many, his virtues still outnumbered them.

HELEN ZIMMERN.

KEW PALACE.

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EW PALACE, which, with the grounds of the Queen's Cottage, was added to Kew Gardens in 1897, making up the grounds now open to the public to just over 250 acres, would not be described by an auctioneer as "a palatial residence," although it must have been a comfortable house. Its internal decorations are simplicity itself. The drawing-room is the only room in it which has an ornamental ceiling, the other ceilings being as plain as those of a kitchen, with not even a cornice, and, instead of plaster on the walls, canvas screens nailed to the bare bricks and covered with the very neatest wall paper of a pattern that could only be found nowadays in a servant's bedroom. The dining-room has a stone floor, and, judging from the way the doors fit down to it, could have had no covering except in the centre. The woodwork throughout is all painted plainly over, some of it being of oak and some of it as tender as tinder from dry rot. The works of art on the walls, and the few articles of furniture, would hardly be worth mention in an inventory if it were not for their associations.

Here is the room in which Queen Charlotte died in November 1818, and that in which died the wife of Frederick Prince of Wales, whose

F. P. appears on many of the locks and keyholes. Here, on June 1, 1818, was married the old Duke of Cambridge, and ten days afterwards, in the same room, the Duke of Clarence was married in the afternoon and the Duke of Kent in the evening; two marriages in one day, the one pair destined to become King William the Fourth and Queen Adelaide, the other the parents of Queen Victoria.

This is not the Kew Palace in which George III lived so much in the summer months early in his reign. That was taken down in 1803. This is the Dutch House, known otherwise as the Prince of Wales's House, the old palace being the Kew House in which Bradley made the observations which led to his discoveries of the aberration of light and the rotation of the earth's axis, the stone on which his telescope stood being that now bearing the sun-dial which stands on the lawn in front of the present building.

From its windows you look out over the Thames, and on the other side over the gardens, which seem every year to become more beautiful. The people who go to Kew on Sundays, Saturdays, and Mondays are mostly those who can go on no other day.

WILHELMINA, QUEEN OF THE NETHERLANDS.

BY MARIE A. BELLOC.



(From photographs by Ad. Zimmermans and Th Molsberger.)

THE young Queen of Holland begins her reign with the united good wishes of the whole of Europe. Owing to the wisdom and tact of her mother, whose eight years' regency has been marked by no untoward incident, the Netherlands are at peace with all the world, and the wonderful gathering of royalties and distinguished people who assembled to do honour to the Queen on her accession, and in which every European Court was represented, is as much a personal tribute to Queen Emma as it is a mark of respect and affection to the young sovereign.

During the last eight years—for the late King died when his only daughter was ten years of age—the girl-Queen of Holland has been, though leading the quietest of lives, the cynosure of all eyes, at home and abroad. The world has been told every detail of her daily life, and we have all been able to watch, with mingled amusement and sympathy, the making of a queen. It now only remains to be seen whether Wilhelmina the First of Holland will be able to live up to the proud motto of the House of Orange, "Ie maintiendrai."

At the time of the late King's death, very few people were aware what reserves of power and wisdom lay hidden in his young widow's character. The Dutch are by no means naturally enthusiastic. One shrewd observer of men and manners styled them the Scotch of the Continent, and it is certainly a fact that they are governed by their heads as well as by Accordingly, the lines of the their hearts. Queen-Regent were not at first cast in pleasant places; the fact that she was a German princess was always present in the minds of those over whom she was called to exercise temporary authority, and her every action was watched with jealous care. In nothing was this more shown than as regarded her management of the little Queen. Wilhelmina's birth had been hailed with enthusiasm; but, as is occasionally the case, the affection felt by the stout Dutchmen for their future sovereign did not for many years extend itself to her mother, and had the Queen-Regent made the slightest attempt to Germanise her daughter, she might easily have found her position an untenable one.

As an actual fact, nothing could have been more admirable than the conduct of Queen Emma; she deliberately set aside what must have been her early interests and affections, and instead of asking, as so many women would have done, some old and trusted friend to be her guide and monitor, she studiously surrounded herself with Dutch statesmen, and although the King had left to his wife the entire supervision of his little daughter's education, the Queen-Regent was always ready



to ask the advice of those of her daughter's subjects who were entitled to have a voice in

the matter of her up-bringing.

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The little Queen was exceedingly carefully and well educated; indeed, at one time, it was rather the fashion in Holland to smile at the extraordinary range of her studies. She speaks, and reads fluently, French, which has remained, in Holland at any rate, the language



QUEEN WILHELMINA IN NATIONAL DRESS, (From a photograph by Ad. Zimmermans.)

of diplomacy; and her English governess, Miss Winter, who was, it need hardly be said, a lady chosen with the greatest care, grounded her in all the ordinary branches of knowledge which modern girls are expected to acquire. After the King's death there was added to the tenyear-old Queen's ordinary studies a special course of lessons, dealing with that portion of Dutch history which might be legitimately considered useful to a future Sovereign. Thus Queen Wilhelmina will be able to more than hold her own in her knowledge of the constitution, and of what may or may not be done, with most of those who will be associated with her in the government of her country.

It would be a mistake, however, to suppose that the young Queen has had a dull or sad girlhood. Her mother always insisted that she should spend a great deal of her time in the open air, and she can skate, row, ride, or drive as well as any girl in Holland. Considering the smallness of the kingdom, there are a remarkable number of royal residences in Holland. Whatever may have been her private inclination, Queen Emma has always arranged that she and her daughter should spend a portion of each year in the splendid royal palace at the Hague, and some of the young Queen's happiest associations are connected with this huge barrack-like building, built by William II.

Very similar is the royal palace at Amsterdam, where as a child she spent many happy days with her father and mother; and in one room, where the Queen will probably hold the more informal of her receptions, was till lately preserved a whole set of miniature furniture, made to the design and order of the late King, when his daughter was only four years old.

In Holland, the Queen is said to prefer the country palace of Het Loo, the beautiful castle where the late King died, and where the Queens have since spent the greater portion of each year; and the picturesque "House in the Wood," a charming villa, famed for its lovely gardens, which contains some of the most exquisite works of art in Europe, including a Japanese boudoir, entirely hung with embossed needlework.

Some months ago a great deal of amusement was felt at a story which mysteriously found its way into the papers, setting forth that the young Queen had been very anxious to become

a cyclist; but that she had been somewhat peremptorily informed that the Dutch Ministry considered her life too precious to be risked in such a fashion. The story was, however, semi-officially contradicted. The Queen possesses in a high degree personal courage, and this is perhaps owing to her mother's wisdom and strength of mind. On one occasion, after a carriage accident in which the two Queens had a narrow escape, the Regent ordered fresh horses to be brought and harnessed, saying aside to her lady in waiting, "If we do not start again at once, my daughter will learn the meaning of the word 'fear.'" Till quite lately she was not allowed to see very much of the world in which her future life will be spent; accordingly, she begins her active reign with practically no knowledge of the Court intrigues of which Queen Victoria was so painfully aware when she ascended the throne.

All sorts of stories are current in Holland proving the young Queen's extreme patriotism. When last in England, the two Queens held a kind of informal reception of some of the leading members of the Dutch Colony in London. One lady mentioned that she had a daughter exactly the Queen's age, and asked if she wight be admitted to an audience. The

might be admitted to an audience. The little Queen inquired whether the proposed visitor could speak Dutch, and on being told that she was unfortunately quite unfamiliar with the language of her ancestors, informed the mortified mother that her daughter would be received with pleasure as soon as she was able to converse with her sovereign in Dutch. This story, if true, goes to show that the Queen has a very decided character. She is

known to be specially devoted to history, and her tutor, Dr. Salverda de Grave, often declared, during the two years that she was under his care, that she studied everything that con-



DUTCH FISHERMEN AND WOMEN. (From a photograph by J. Kuhn.)

cerned the glorious exploits of her own countrymen with the enthusiasm of a student.

In one matter the Dutch Court differs very widely from any other. It is comparatively easy for any respectable persons who wish to pay their respects to the Queen to obtain an audience. All that is necessary is for the visitor to call at the palace and write his or her name in the book provided for the purpose. If



AT ZAANDAM.
(From a photograph by J. Kuhn.)

the application to be received is considered satisfactory, an intimation is sent that the Queen will be ready to see the visitor at such and such an hour.

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ery ely to an the ier It is rather a curious thought that, but for the fact that William III, after the death of his two sons by his first wife, set aside the Salic law of the Netherlands, the present Queenregnant of Holland would be the subject of her German cousin, Bernard of Saxe-Weimar; and not till it became clear that the baby princess was to remain the only child of the King and Queen, was this radical change in the Dutch law of succession seriously considered.

Owing to the fact that the sovereign attains his or her legal majority at the age of eighteen, Queen Wilhelmina takes over the duties of A propos of her large fortune, it is said in Holland that the Queen is, as is perhaps natural, of a very much more spending disposition than is her mother; still, she has been taught the value of money, and the largest sums ever spent by her have gone on wedding and other presents.

The young Queen of the Netherlands has had one great advantage over most youthful sovereigns. There is fortunately no law against the sovereign leaving the kingdom when it seems suitable or advisable that he or she should do so. Accordingly, the Queen Regent and her daughter have often taken short tours, not only on the Continent, but to England. Two years ago they spent some time on the splendid mountain, the Revard,



RUINS ON THE RIVER BERKELY, ZUTPHEN. (From a photograph.)

sovereignty at exactly the same age as did Queen Victoria sixty-one years ago; but in spite of all the rumours of her impending betrothal, it is widely believed in the Netherlands that the young Queen intends to follow the example of Queen Elizabeth rather than that of Queen Victoria; and there seems to be no doubt that up to the present time personal romance has played no part in her life.

On her accession, Queen Wilhelmina became exceedingly wealthy; indeed, with the exception of the Emperors of Austria and Russia, she has a larger income than any sovereign in Europe. Her civil list, secured on the revenues of Borneo, amounts to 3,000,000. per annum, while in addition there is the enormous fortune left by Prince Henry of the Netherlands, who early invested large sums of money in the Dutch West Indies.

above Aix-les-Bains; and last year, on their way to Cannes, where the two Queens had been specially invited to attend the wedding of Prince Christian of Denmark, they passed some days in Paris, where they were received with great enthusiasm, for there have always been strong links of sympathy between France and Holland. It is interesting, by the way, to recall that Queen Wilhelmina paid her first visit to England before her second birthday, for she accompanied her parents when the latter were invited to be present at the marriage of the Duke of Albany to Queen Emma's sister. Since then she has been to Claremont several times.

Perhaps no woman in the world, not even Queen Victoria, has been more often painted and photographed than has the eighteen-yearold sovereign of Holland; her counterfeit presentment is to be found in every Dutch home,

and in every public building; indeed, she is said to have herself remarked that one reason why she liked going to church was because there she was sure of not seeing her own portrait! Perhaps the prettiest portrait of her in existence is that which shows the Queen in the national dress, which is still one of the distinctive glories of provincial Holland. There can be very little doubt that Wilhelmina's influence has done much of late years to keep alive many of the interesting old traditions of national forms of dress and speech which in so many countries are fast disappearing. The queens of Holland have occasionally worn the "kap" as a compliment to the people, but Wilhelmina has made a special point of often being seen in the picturesque white lace headdress which, fitting tightly round the forehead, is a trying mode even to quite a young girl. The gold and silver clasps and filigree ornaments worn on the "kap" are among the Crown jewels. In addition to these, however, the young Queen has had a number of gold filigree "kap" ornaments made to her order, and bearing entwined the letter "W" surrounded by a royal crown in diamonds.

As for the country over which the Queen is now called upon to reign, those familiar with Motley's great book on the rise of the Dutch Republic will be able to gather a very accurate picture of the character and nature of the Dutch people; for, unlike England, Germany, and France, the Netherlands have remained practically untouched by Continental civilisation. Accordingly, the conduct of Queen Wilhelmina will be very narrowly watched, and though she is beloved, she will be frankly criticised, for the Dutch have a very clear idea of what a woman ought to be. In one matter Holland does not follow the Continental fashion. The average Dutch girl is allowed to choose her husband, and though her parents expect her to yield them implicit obedience on every other matter,

they consider that in so important a thing as marriage their daughter should be allowed to exercise her own judgment.

English and French governesses generally conduct the education of girls belonging to the upper classes, and the Queen, like most of her contemporaries, possesses an exceptional knowledge of the best English literature, especially of the somewhat old-fashioned kind. The example set by Queen Emma has already told for good, for the Regent has done everything in her power to raise the general standard among her young daughter's feminine subjects, while being most scrupulous to encourage in every way the acquirement of the excellent housewifely qualities which are the average

Dutchwoman's great pride.

As to the young Queen's personal appearance, she is somewhat taller than one imagines from her photographs; and fortunately, from every point of view, she is the typical, or, perhaps it should be said, the ideal Dutchwoman, possessing a robust figure, a fair, clear complexion, bright blue eyes, and abundant brown hair. The Queen's religious training has been entirely arranged by her mother, under the superintendence of several Lutheran divines. Everything was done to surround the ceremony of her confirmation with solemnity and circumstance. It took place on the sixteenth anniversary of her birthday, but no receptions were held in honour of the event, and on this occasion, for the first time in the Queen's life, no birthday addresses were presented to her, for the Queen-Regent very rightly considered that her daughter's mind should not be diverted from the serious act in which she had been engaged. The religious question will certainly play a part in the young Queen's marriage, when it comes to be seriously considered. According to the terms of the Dutch constitution, she may not espouse a Roman Catholic or a Greek Orthodox prince.



VIEW NEAR DELFT (From a photograph by J. Kuhn.)



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From a photograph by Sir Benjamin Stone, M.P.

'HE sudden coming to the light of an original marble bust of Oliver Cromwell, executed by the most eminent sculptor of his time, promises to be one of the most notable events of the year 1898. Its acquisition by the nation constitutes the most important contribution to the national collection of portraits for many years. Various and opposite as the estimates of the great Protector's character may be, and likely as they are in some measure to continue, the newly discovered bust from the hands of the highly important Florentine sculptor Bernini (1598-1680)—who was employed by Charles I for portraits of himself-is held on all sides to contribute less familiar but singularly interesting traits of character. To most observers it gives a distinctly more refined and genial expression to features which have hitherto been known only through painters who seem largely to have followed one another, and to have sketched only one, and probably the prevailing,

mood and expression of Oliver's strong but mobile face.

Fortunately the history of Bernini's bust, which is an exquisite work of art, is sufficiently well known and authenticated. It has been of late years in the historic collection owned by Lord Revelstoke; where, but for the newer value given to every relic of Cromwell by the remarkable revulsion of feeling in his favour which the last fifty years have witnessed, it might easily have passed into obscurity. Singularly enough, its sudden emergence into fame, and its acquisition by the House of Commons, is not due to Cromwell's English admirers. It is the gift of a Jewish gentleman, Mr. Charles Wertheimer, of London. Remembering how Cromwell had befriended the Jewish race, and had admitted them to England after some centuries of banishment, Mr. Wertheimer, having purchased the bust for the sum of £1,400, presented it to the House of Commons, as a grateful offering to the British nation. It was accepted on behalf of the House and the nation by Mr. Balfour, and it now stands temporarily on a pedestal in the Members' Lobby-one of the most re-

markable human documents to be found under

the roof of St. Stephen's.

Hitherto Cromwell's personal appearance has only been known through the portraits of Up to the present year the the painters. abundant Cromwell literature contained no mention of a marble bust, although, of course, the conventionalised portrait on the Dunbar medal, by Simon, has often been engraved. The painted portraits by Cooper, Walker, Faithorne, and Lely have all a singular resemblance. Hitherto the best of the group has been considered to be the large drawing by Cooper, in the master's house at Sidney Sussex College, Cambridge (Cromwell's own

All seem to agree in portraying the big, massive head, the solid face, and strong and prominent nose, the historic wart over the right brow, the sad eyes set in large orbits beneath the prominent brow ridges ("the bar of Michael Angelo"); the light brown hair falling in locks

over the shoulders, the slight scanty moustache, and the tuft on the under lip. Cooper and Lely, it has been remarked, paint the brows as knit, and somewhat drawn downwards. Walker and Faithorne make the brow high and well arched over the eye. So, too, does Simon, the author of the famous Dunbar medal. With one exception the expression of the face in all the pictures is very sad and melancholy:

Deep scars of thunder had intrencht, and care Sat on his faded cheek."

But Bernini's beautiful bust is in remarkable contrast to the sadness and suggestion of coarseness which marks most of the painters' portraits. The main features of the lion face are there, but the added look of refinement and alertness which Bernini has seized is nothing less than startling. Instead of the heavy eyelids, and the look of depression, the eyes are large, open, and inquiring, with a singularly modern wistfulness and humanity. The whole aspect of the countenance is keen, bright, and genial. The swollen look which has been the feature of so many descriptions and apologies -even down to the days of Mr. Frederic Harrison and the Rev. Dr. Horton-is entirely absent; the nose is that of the fine portrait by Walker, now at Hinchinbrook, the mansion built by Oliver's uncle.

In short, when Cromwell gave the interviews or sittings for Bernini's bust, it was evidently a period when, in spite of enormous cares, the Protector could occasionally give scope to the relaxations he loved. We see in this wonderful marble portraiture something of the Oliver who loved music, encouraged musicians, and held weekly concerts; who preserved to our country the cartoons of Raphael and the "Triumph" of Mantegna, together with some royal palaces and parks. This is the Cromwell who collected a fine library, who sought out and gathered around him men of genius and learning. The Protector had all the Furitan love of learning; "and if," says Neal, "there was a man in England who excelled in any faculty or service, the Protector would find him out and reward him according to his merit."

The bust shows the Protector wearing the Dunbar medal, struck in honour of the victory over the Scots at Dunbar on September 3, 1650. The reverse of the medal, which is worn outwards, represents the old House of Commons, with Speaker Lenthall in the chair, and Cromwell addressing the House from the Treasury Bench. The obverse, which is not shown, bears a portrait of the Protector (a reproduction will be found in Green's "Short History of the English People," illustrated edition, vol. iii.) The dies for the medal were

cut by Thomas Simon, the finest English medallist of his day.

Simon, it will be remembered, was despatched to Scotland by the House of Commons, immediately after the battle of Dunbar, to take the "effigie," portrait, or statue of the Lord General to be placed on the medal, and he had some difficulty in satisfying the Lord General with the likeness. To-day Simon's famous crown pieces are worth £600 each. Comparison of : n electrotype copy of one of the Dunbar originals which has been forwarded by Sir Benjamin Stone—by the authorities of the British Museum with Bernini's reproduction, shows that the sculptor has performed his work with marvellous

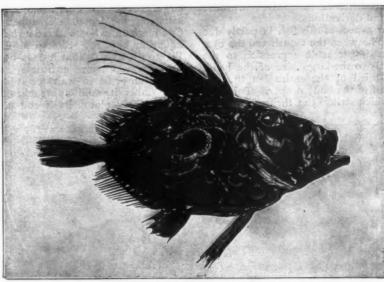
The bust helps us further to understand the dignity of bearing ascribed to the Protector by his contemporaries on great public occasions. "His dealings with ambassadors," writes Thurloe, "were marked by a carriage full of dignity and state." Nor were the comments of his opponents on his personal appearance Swift writes of always uncomplimentary. Mary Cromwell, "she was handsome, and like her father." The great installation at Westminster, when Cromwell, who refused to be king, was nevertheless invested with the duties of kingship, was as stately and solemn as a coronation. The Speaker, in the name of Parliament, delivered to him a robe of purple velvet, a Bible richly gilt and bossed, a sword, and a sceptre of massive gold. It was with more than the dignity of a Napoleon that he received the homage of Mazarin and Louis, Spain and Portugal, of Pope and Princes of Italy. He was not unmindful of his lineage, and used the coat and crest of his family, as shown in the historic mansion of the Cromwells at Hinchinbrook tc-day-sable, a lion rampant, argent; crest a demi-lion rampant, argent, in his dexter jambe a gem ring, or; the latter is said to have been granted to Sir Richard Cromwell by Henry VIII, when he gave the knight his diamond ring in reward for splendid feats performed in a tournament before the king. With the coat and crest the Protector used the motto: Pax quæritur bello.

The excellent photograph with which Sir Benjamin Stone has favoured us gives of course but one of the many aspects which a contoured bust affords to the observer from different points of view, as compared with a painting on canvas. The facial expression to which we have called attention as being Bernini's special contribution to our knowledge, is best seen when the original is viewed under less of shadow. By the time these lines are in print the bust should be on public view in Westminster Hall, or elsewhere, mounted on the more suitable pedestal which is being specially prepared for it by

Mr. Wertheimer.

TWO UPRIGHT FLATS.

BY EDWARD STEP, F.L.S., AUTHOR OF "BY THE DEEP SEA," ETC.



JOHN DORY.

(Copyright of Edward Step, F.L.S.

O much has been written in eulogy of the glorious colouring and remarkable forms of tropical fishes, and especially of those that haunt the coral reefs and atolls, and browse upon the living coral, that we are in danger of overlooking the fact that our own seas contain fishes that are both singular-even grotesque in form, and brilliant in colour. Our foodfishes are perhaps too uniformly silvery-grey or ruddy-brown to attract much attention to their beauty, especially as they are unknown to the majority of our people, who do not see them, in the inland towns and cities, until their brilliance has in large measure departed for ever. among the rarer forms even of our food-fishes there are some fine examples of strong coloration and bold contrasts, as well as of quaint and tropical-looking form. The two things are combined in the various species of Gurnards, the Dory and the Boarfish. It must, however, be admitted that these are fishes that have their headquarters in warmer seas, and are here found chiefly on our southern shores.

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Not the least singular among these are the John Dory and the Boarfish, which may be popularly described as upright flat fishes, though they are not regarded as "flats" by ichthyologists. There are considerable structural differences between these and the true "flats," though the last named swim uprightly in the early stages of their development, when

they have an eye on each side of their heads. The sole, plaice, turbot, etc., early take to the horizontal position, and develop protective coloration, the better to elude their enemies and delude their prey; for which purpose they lie on the sandy bottoms, and the eye that is on the lower side gradually travels round until it is on the upper surface beside its fellow. The Dory and the Boarfish, on the contrary, maintain the upright position, when, thanks to their greatly compressed form, they are able to swim through narrow spaces between rocks and weeds on rough ground, and so come quietly and suddenly upon smaller fishes without exposing their presence in time to enable their prey to escape.

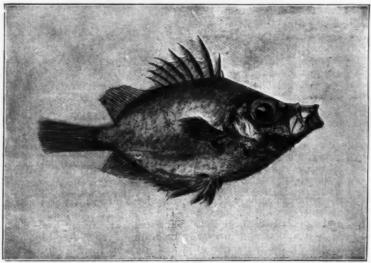
The John Dory (Zeus faber) is a fish whose name is more familiar to the multitude than its form-more from reading than from meeting the fish at table-for a considerable quantity of ink has been shed in explaining the derivation and significance of its names. Its popular designation is said to be properly written Jaune dorée, in allusion to the yellow and dull gold colouring assumed by it. Others regard it as a corruption of Il Janitore, the Door-Keeper, by which name it is known along the Adriatic, and which, apparently, has connection with St. Peter, the legendary door-keeper of heaven, for it is sometimes styled St. Peter's fish because of the black mark on each side. As in the case of the

haddock, these spots are supposed to have been made by the finger and thumb of the Apostle when he took up the fish that had the tribute-money in its mouth. The ancients regarded it as a fish sacred to Zeus, a circumstance commemorated in the scientific name of the genus. They also called it the Smith (faber) and Coppersmith (chalkeus), the latter probably referring to the mixture of copper and soot in its colouring. The reader is at liberty to retain as much or as little as he pleases of these explanations and derivations.

The singular aspect of this fish is partly due to the distance between the mouth and the eye, which gives a disagreeable expression to the face; and partly to the large size of the head, which is one-third of the entire length, and very nearly half of the body proper. This last is a feature which strikes the thrifty housewife

the brown and olive weeds where it is said to seek its food. That it does for the most part resort to the rough ground at the bottom is proved by the fact that it is chiefly captured in the trawl and the trammel, though it may also be taken in mid-waters by baiting the hook with a small fish, such as a chad or pilchard.

As already indicated, the movements of this fish are not very rapid; in truth, it appears to cultivate sloth as a fine art, and to depend largely upon its sluggishness for success in satisfying the demands of appetite. Mr. J. T. Cunningham, who observed its behaviour in the aquarium of the Biological Laboratory at Plymouth, tells us that it does not overtake its prey by superior swiftness, as does the mackerel, or lie in wait for it like the angler; but stalks it, and approaches it by stealth. "The Dory places itself end on towards the



BOARFISH.

[Copyright of Edward Step, F.L.S.

unpleasantly, for in preparing the Dory for the table, the head, tail, and fins being cut away, the remainder is a very small matter. But the great development of the first back (dorsal) fin is what first engages attention, more especially in a full-grown specimen. The fin-rays themselves are very long, but from these spring much longer streaming filaments, and it has been said that the Dory uses these somewhat after the manner of the Angler-fish with the fishing-rods upon his head. This statement was made by Jonathan Couch, on the testimony of fishermen; but I think it is open to serious question, as the filaments float the wrong way to serve as baits. The Dory is a slow-moving fish, and, supposing he felt a nibbling at one of his lines, he could not turn with sufficient rapidity to secure the nibbler. It is more likely that the waving of these streamers has its part in the general effect produced by the coloration and the indefinite markings of the body, which must harmonise splendidly with

fish it desires to devour, and in this position it is evident that it excites no alarm on the part of its prey. The appearance of the Dory seen in this way is a mere line in the water, to which no particular significance can be attached. . . The movements of the Dory are very gradual except in turning: it alters the position of its body by a turn of the tail or side fins, and then slowly swims forward by vibrating the second dorsal and ventral [fins], a movement which causes very slight disturbance of the water." It has a remarkable mouth, and the extent of its ordinary opening is seen in the photograph; but, when occasion requires it, by the spreading out of several folds or plaits, it can prolong it and increase the opening to such an extent that it can swallow a fair-sized pilchard or herring. By the sudden expansion of these telescopic jaws when it has approached near to its prey, it is at once brought closer, and the mouth is made large enough to encompass the victim.

A living Dory is a fine, striking fish, but as

life passes from him so do his colours fade, and he becomes pale; but when entirely lifeless the yellow and copper and blue return, though not with their former brilliance. We have watched this change of colour in Dories taken from the trammel and thrown into the bottom of the boat. At first the fish exhibited manifest anger at being kept out of its proper element, elongating its jaws, puffing up its body, and grunting out its disgust audibly. This last habit is one that appears to have escaped the notice of previous observers; but the Dory must be included among those fishes that have the power to utter sounds, which are probably caused by the emission of air from the swimbladder.

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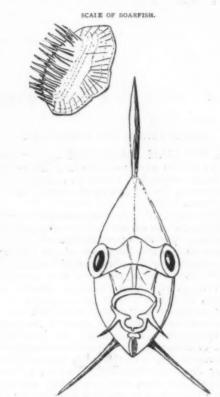
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Although much has been done in recent years to make us acquainted with the life histories of marine food-fishes, the Dory is one of the few that have hitherto eluded observation of its earliest stages. The egg is at present unknown, and there is a good deal of contradiction respecting the spawning period; Mr. Matthias Dunn, of Mevagissey, holding that it spawns in winter, whilst Mr. Cunningham is of opinion that the ova are shed about midsummer. Probability is all in favour of the latter view, for it is based upon the examination or fishes in spring, when the roe was found to be ripening, and in autumn, when it was found to have been shed; also upon the progressive sizes of young fishes at successive periods or the year. Dories attain to a length of about twenty inches. Couch records a specimen measuring 221 inches, and another, he says, weighed 18 lb. Cunningham appears to have combined these figures in one individual, for he says, without quoting Couch, "The largest specimen was 221 inches long and 18 lb. weight." The full size is attained in three or four years. Dories are plentiful on the coasts of Devon and Cornwall and up the Bristol Channel, as well as around Ireland; but on the north and east coasts of Britain they are rare.

The only fish we have in British waters that at all resembles the Dory is the Boarfish (Capros aper), which is by some authorities placed in the same family, whilst by others they are separated. This is even more local than the Dory, and of comparatively recent addition to the list of British fishes. It was first made known as such by Dr. Boase, who took it in Mounts Bay, in the year 1825, and solitary individuals were taken in the Channel at intervals during the next fifteen years, chiefly on the coasts of Devon and Cornwall. In 1843 a number were obtained by trawlers on the Cornish side of Plymouth Sound, and in the following year a couple of hundred were obtained within a fortnight, by trawling round the Runnel Stone near the Land's End. During the following twenty-five years there were few records of its occurrence, but from the year 1873 it again became fairly plentiful between the Start and the Lizard, and more especially near the Dodman. So it continued, until the early part of 1879, when a severe east

wind blew along the Channel with most disastrous effect upon the poor Boarfish. Hundreds were cast upon the shore dead, and they have since been found only in summer and in deep water, where they swim near the bottom. They are chiefly taken in the trawl, but several specimens have been brought to me that were caught in the trammel-net.

The general appearance of the Boarfish is somewhat suggestive of the Dory, though the head is not nearly so massive, and the first dorsal fin is without the streaming filaments that are so characteristic of the Dory. It is also without the elaborate markings of the



END-ON VIEW OF BOARFISH.

Dory, and is plainly but gloriously clad in a Stroke its silky coat of vermilion-orange. sides from head to tail and you get the impression or silkiness; reverse the operation, and you might as well be stroking a teasel-head the wrong way. The explanation is found in the structure of the small scales with which it is covered, one of which I have sketched. Individually these measure about 24 mm. across the longest diameter, and the hinder portion gives rise to a double series of fine, rounded and polished, slightly curved, flinty spines. The bare portion is covered by the overlapping of the next scale. The mouth of the fish is, if possible, even more intricately folded up than that of the Dory, and equally serves for large or small prey. Couch appears

to favour the notion that its food consists exclusively of small crustaceans; but a creature with an adaptable mouth like this must also use it frequently for larger prey, or it would soon become permanently small. Its habits and methods of hunting are probably very similar to those of the Dory. The accompanying sketch of a Boarfish, end on, I made from a living specimen a few years ago, and it will serve to illustrate in the case of this fish the remarks made on the appearance of the Dory under similar conditions.

The eye of the Boarfish is very large—in the specimen whose portrait is given it was fiveeighths of an inch across, the entire length of the fish being six inches. The central portion is black, encircled by a broad band of red. I have never tried the Boarfish as food, not having obtained a sufficient number at one time; but it is said to be excellent fare. The popular name appears to have been bestowed on account of the pig-like aspect of the extended mouth.

We may note, in conclusion, that Couch's figures of both species are singularly incorrect, that of the Boarfish especially—the general shape being wrong, the mouth wrong, the fins wrong, and the colouring wrong.

A FEW WORDS ON MEMORY.

MEMORY RETAINS AND REPRODUCES.

SIR WILLIAM HAMILTON says "Memory is the power of retaining knowledge in the mind, but out of consciousness; I say retaining knowledge in the mind, but out of consciousness."

"We must further be endowed with a faculty of recalling it out of unconsciousness into consciousness—in short, reproductive power."

Here we see succinctly stated the two processes that we combine in the word "memory": the one, the power of retaining past events as Sir William Hamilton states so clearly, and repeats, as if aware that the language is entirely unorthodox, "in the mind, but out of consciousness"; while the other is the power of reproduction, of recalling this past event "out of unconsciousness into consciousness."

Of course, like everything else that is deduced rather than demonstrated, the first of these processes has been most vigorously disputed; quite a number of authorities denying the possibility of any mental process or ideas being retainable or existent out of consciousness.

We agree with Sir William Hamilton, resting our belief on the generally admitted fact that no mental process ever takes place in the brain without leaving a permanent organic trace behind, which forms the physical basis of memory.

HERBERT SPENCER DISPUTES THIS.

Herbert Spencer, however, combats this idea as follows: "Ideas are like the successive chords brought out from a piano. And it would be as proper to say that these passing chords thereafter exist in the piano, as it is proper to say that passing ideas exist in the brain." But, as Maudsley remarks, "What

¹ See Maudsley: "Physiology of Mind," p. 70.

about the performer in the case of the piano

and the brain respectively?"

"And there is this difference between the passing chords in the piano and in the brain, and it is the essence of the matter, that in the former case the chords do pass and leave no trace in the structure of the piano, while in the latter they do not, without leaving the most important after-effects in the structure of the brain. Whence does arise in due time a considerable difference between a cultivated piano and a cultivated brain. Those who speak of latent ideas do therefore endeavour to denote thereby an important something which Mr. Spencer's analogy leaves out of sight."

We must not, however, enter upon controversy in our leisure hours, but will assume upon, we think, most excellent grounds, that Sir William Hamilton's lucid definition of

memory may be relied on.

APPERCEPTION.

To understand the wonders of memory, the next point we must touch on is apperception. The moment a French napoleon is held up before a child's eyes it is perceived, and is seen as a hard, circular, yellow, roughish disc. If felt, it is also observed to be cold and heavy. To us, however, apperception, that is, the store of unconscious memory, instantaneously adds much more. We know it is worth 16s. 8d., or twenty francs; that it is left over from our last French tour, of which the sight of it recalls many scenes, and so on. Memory when thus unconscious and instantaneous, is generally called apperception, which consists in the rapid and unconscious adding to our conscious perceptions information collected from the stores of memory. "The soul," says Professor Lazarus (quoted by Lange²), "not only takes

² Lange: "Apperception," p. 267

hold of a new impression which fills consciousness, but there are also unconscious elements active in the process of apperception which, with the contents of consciousness, form one group.' We thus see and hear not only with the eye and ear, but quite as much with the help of our present knowledge-with the apperceptive contents of our own mind.

ITS PRACTICAL IMPORTANCE.

Let me give an instance of perception without apperception that occurred to me a few weeks ago. I was driving to a small country house by the roadside, where my family were staying for the summer, by a new route for the first time. With the ordinary road I was quite familiar, but by this new way, of which I knew nothing, I had no idea of when, or from what side, I would come upon my temporary home. I drove past the gate, stared the house beyond, and went on deliberately up the lane, without in the least recognising it; and it was only when I got on the old route farther on, and reached a well-known turning, that I recognised (apperceived) where I was, and was forced to own to myself that I had driven by my own house without recognising it. I had perceived it as a child would a napoleon, but had not apperceived it; that is, the added information from memory that it was my house and gate that struck my eye had not been forthcoming.

It will be seen incidentally how all important this apperception is in the training of character in children. What the words "home," "school," "father," "mother," means to a man, depends entirely upon the apperception of the word; that is, upon the unconscious memories that wake and cluster round it, derived from the indelible impressions of childhood. It is then that the lines are traced upon the brain, that go to form the character of the

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MEMORY IS CONSCIOUS AND UNCONSCIOUS.

Memory reaches back to ancestry, and reproduces not only impressions stamped on the individual's brain during his life but, there is reason to believe, others on his mother's, or derived even more remotely by heredity.

The Rev. W. S. Lach Szyrma, of Newlyn St. Peter, Cornwall, writes: 1

In early childhood I had two prominent day dreams, which I have seen hundreds of times in childhood

1. A large village with a stream and small bridge and

church, a road going north, and a park on the east.

When an undergraduate at Oxford, my mother arranged my going to Addenbury, where our family have been since 1800 at times, and where she had spent her childhood. This was the village of my dreams.

2. A large village near the sea with a very steep hill, descended in steps. The houses in terraces, with wood-

Till July 1889 I never saw Clovelly, where my maternal ancestors had long lived (Cary's) at Cary Court. This was my second dream village.

The Rev. Charles Kingsley, who was born in Devonshire, tells us that his mother for a long time, just before his birth, luxuriated in the romantic surroundings of her Devonshire home, and in every sight and sound around her. Her son left Devonshire when he was six weeks old, and never saw his birthplace till he was a man of thirty, but always attributed the mysterious charm that every Devonshire scene had for him during after-life far more to these antenatal memories than to those imprinted during his six weeks of infancy.

UNCONSCIOUS MEMORY.

Passing on to general instances of unconscious memory from impressions received with or without our knowledge during earlier life, we note that giddiness on knowing we are approaching a great height or dangerous path is often felt as the result of unconscious memory of similar positions before. This is never felt by animals.

Dr. Kellogg (quoted by Hack Tuke) tells us that while young he always had to cross a rough arm of the sea in a small, steamboat, and was invariably sick. On the boat was an old blind fiddler. The result was that for years after he never could hear the violin without experiencing nausea.

Miss Frances Power Cobbe 3 sat in a room to write where she had sat and studied eight years before. She felt her feet moving restlessly under the table, and then remembered that eight years before she always had a footstool. It was this her feet were seeking.

SEEN IN CRYSTAL GAZING.

There is a phenomenon known as crystal gazing, which illustrates how unconscious memory acts when consciousness is partly in abeyance. There is no value or magic in the crystal, it appears to revive unconscious memories simply because it presents no object to the mind, and the steady gazing partly abolishes consciousness. We will give an instance or two of memories thus revived.

A lady in crystal gazing (staring into a piece of crystal until consciousness being partly in abeyance, the unconscious comes into view) saw a bit of dark wall covered with white jessamine. She was conscious she must have seen it somewhere, but had no recollection where. She walked over the ground she had just traversed, and found the wall which she had passed unnoticed.

She took out her bank-book another day. Shortly afterwards she was gazing at the crystal and saw nothing but the number 7694. She thought it was some cab number; but taking up the bank-book found to her surprise it was the number of it.

At another time she destroyed a letter without noting the address; she could only

^{1 &}quot;Journal Psychical Research Society," Dec. 1895. p. 351.

^{Charles Kingsley: "Life," vol. i. p. 4F. P. Cobbe: "Darwinism," p. 326.}

remember the town. After gazing at the crystal some time she saw "H— House." She addressed the letter thus, adding the town,

and found it was right.1

In a similar way, when we cease trying to think of a name or a place we have forgotten, it comes into our minds as it were of itself. Indeed, sometimes we actually utter the word involuntarily, so powerfully does memory reproduce it when discovered recorded in some brain cell. and the second and the second of the second

UNIQUE TESTIMONY TO UNCONSCIOUS MEMORY.

We now reach a very valuable and unique body of testimony to the action of the uncon-

scious mind in memory.

The following questions were asked from a body of 200 American University students and professional persons, 151 being men and 49 being women. The answers are recorded and given by Professor Child.2

Q. 1. When you cannot recall a name you want, does it seem to come back spontaneously without being suggested by any perceived association of ideas?—To this, 11 per cent. answered "No," and 81 per cent. answered "Yes."

Q. 2. Does such recovery ever come during sleep?—To this 17 per cent. answered "No," and 68 per cent. "Yes."

Examples given:

I. This morning I tried to recall the name of a character I had read of the night before in one of Scott's novels, and failed. I taught a class, and walking home in the afternoon, all the names recurred to me without effort.

2. I tried to recall the name of a book. Gave it up. Half an hour after, while talking of something else, blurted

it out without conscious volition.

Q. 3. On seeing a sight or hearing a sound for the first time have you ever felt that you had seen (or heard) the same before?-Fifty-nine per cent. answered "Yes." The action of unconscious memory during sleep is illustrated by further queries.

Q. 4. Do you dream?—Ninety-four per cent. answered "Yes."

- Q. 5. Can you wake at a given hour determined before going to sleep, without waking up many times before?—Fifty-nine per cent. answered "Yes," 31 per cent. answered

Q. 6. If you can, how about failure?- Sixty-nine per cent. seldom failed; 25 per cent. often.

- Q. 7. Do you come direct from oblivion into consciousness?—Sixty-four per cent. answered "Yes," and 16 per cent. gradually.
- Examples: 1. I had to give medicine every two hours exactly to my wife. I am a very sound sleeper, but for s'x weeks I woke up every two hours, and never missed giving the medicine.

 2. I am always awake five minutes before the hour I set

the alarum.

3. I had had little sleep for ten days and went to bed at . nine, asking to be called at midnight. I fell asleep at once. I rose and dressed as the clock struck twelve, and could not believe I had not been called.

RELIEF WHEN MEMORY BECOMES CONSCIOUS.

With regard to the entrance of memories into consciousness, it is remarkable what a relief this causes, and what discomfort is felt until it is effected. "It is surprising," says

be made by the obscure idea of something which he ought to have said or done, and which he cannot for the life of him remember. There is an effort of the lost idea to get into consciousness, which is relieved directly the idea bursts into cognisance." Oliver Wendell Holmes says

Maudsley,3 " how uncomfortable a person may

"There are thoughts that never emerge into consciousness, which yet make their influence felt among the perceptive mental currents, just as the unseen planets sway the movements of the known ones. I was told of a business man in Boston who had given up thinking of an important question as too much for him. But he continued so uneasy in his brain that he feared he was threatened with paralysis. After some hours the natural solution of the question came to him, being recalled as he believed during that troubled interval.21

HOW TO ACQUIRE A GOOD MEMORY.

A word now as to how a good memory may be best acquired, may close these few remarks.

Recurring to the two processes which we call memory-the impression and the power of bringing this into consciousness at will, it is evident we want deepness and clearness in the former, and quickness and certainty in the latter. As to the impression, the way to get it clear, and sharp, and deep is by concentrated attention at the time to the matter to be impressed. The matter should be definitely presented, and not encumbered with too many details. In short, a bold and accurate sketch rather than a finished drawing is what is wanted.

If possible, the knowledge of it should enter the brain, to be stored there, through more than one channel. It is thus better to hear about a thing and to read about it also than to hear of it twice or read of it twice. If, in addition, it can be felt, or smelt, or tasted as well, it is more

certain to be remembered.

SIMULTANEOUS OBSERVATION.

Sufficient time should be given to fix it in the mind, but in daily life it is often the man who can observe and store the greatest number of facts simultaneously that is most successful. Now this faculty can be greatly strengthened and improved by practice. A very good way is to place at even distances upon a large table a given number of articles that have no special relation to each other. Then let the person enter the room and look at them for one, two, or three minutes by the watch; then go out and write down all he can remember. This exercise is invaluable to those who wish to acquire quick and elastic memories; and by degrees one can get to take in as many articles in one minute as formerly in three.

With large classes, the way it is done is to hang the articles on a wall or board covered with a sheet. The students are all seated in front, and the sheet is withdrawn for the time arranged

 ^{&#}x27;' Journal Psychical Research Society," vol. v. p. 507.
 Professor Child in "American Journal of Psychology," vol. v.

Maudsley: "Physiology of Mind," p. 299.
 O. W. Holmes: "Pages from Odd Volumes," p. 282.

and then replaced, and the class allowed five or ten minutes to write down all they can remember.

DEEPENING IMPRESSIONS.

Again, another way of deepening rather than widening memory is to re-impress the image several times at intervals, if possible, by a fresh channel. But the most important element in the formation of a clear and permanent impression on the brain, is the power of concentrating the entire attention for the time on the matter in hand.

A painful way of deepening impressions is by physical sufferings. Thus in beating the parish bounds, small boys used to be whipped at important corners in order that when they were old men they might remember the exact place.

With regard to the other part of memory the recalling of the impression thus formed at will—this also may be improved by method or practice.

VALUE OF ASSOCIATION.

The best help is undoubtedly by association; for by this you have two strings instead of one to pull up the subject from the depths. I might not have been able to remember that the day I first started business was the fourth of June, had not that day also been my birthday; and thus, though a direct effort to remember the day would have failed, the recalling of the

birthday, which is easy, brings back the other event, which is difficult.

With regard, therefore, to any event or importance, always associate it with something easily recalled.

Again, the impression should be frequently revived, that is, brought into consciousness, and the oftener this is done the more permanent the impression. Anything, therefore, that is of importance to be borne in mind should, in the first place, be well impressed, and next, for some weeks, be brought into consciousness at intervals by

One thing to be always avoided is different impressions of the same thing. If a young child were sometimes taught that two and two make four, and at others that they make five, his memory would remain confused throughout life.

Memory is most active and accurate when the mind is fresh and quiet.

Some illnesses seem temporarily to destroy it; and old age, while it obliterates recent memories seems to revive earlier ones, the earliest scenes being remembered latest. The most vivid memories are found in death or also in great danger; sometimes memories being revived of the most trivial character, as when the drowning fisherman cried out, "Mother, I didn't tak' Tommy's cak'," words he had uttered once, over thirty years before.

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ALFRED SCHOFIELD, M.D.

** We shall be glad to receive any helpful correspondence or interesting fresh illustrations on this subject.

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Science and Discovery.

OZONE AND HEALTH.

SEASIDE places are usually supposed to be healthy because of the large proportion of ozone which the atmosphere there contains. Chemists assure us, however, that the peculiar smell which is usually associated with the sea is not due to ozone at all, but to other and less health-giving gases emanating from dead sea-animals and -plants. Of the invigorating qualities of ozone there is, of course, no question. But though this has been long known about ozone, which is really a very active form of oxygen-the lifegiving constituent of air-it is only recently that the gas has been artificially prepared on a large scale and made commercially available. It is not now necessary to go into the country to breathe ozonised air, for a small apparatus can be purchased which will easily and quickly generate, by electrical means, enough ozone to exert distinctly beneficial effects upon the health. More than this sanitary specialists are using the artificially prepared gas as a means of purifying contaminated air, such as that in hospital wards, while surgeons are employing it to facilitate the healing of wounds. Among other applications of artificial ozone, that of bleaching vegetable colours takes an important place, and there is no doubt that the immediate future will see this product employed in a great variety of ways.

NEW PHOTOGRAPH OF THE MOON.

It has already been mentioned in these columns (September 1896) that a marvellous collection of photographs of the moon is being made at the Paris Observatory. When completed this will provide astronomers with a permanent and trustworthy record of the principal features observable on the surface of our satellite. The latest addition to this photographic lunar album is published in the Annual Report just issued by the Director of the Observatory, M. Loewy, and is here reproduced. It is not too much to say that this is the finest photograph of the crescent moon

that has yet been taken. The moon was only four days six hours old, and therefore not far from the sun at sunset. At such a time considerable difficulty is

experienced in photographing the moon; for an exposure can only be commenced at the end of twilight, and our satellite is then at but a small elevation above the horizon. In spite of these difficulties, however, a careful examination of the accompanying picture will reveal a considerable amount of information respecting the surface of the moon. Lunar craters, similar to those of extinct volcanoes on the earth, can be distinctly seen, and also a comparatively large dusky area which is usually regarded as the exposed bed of what was originally an ocean. The true nature of a number of delicate markings has been decided by this and previous photographs taken at Faris. Evidence

is now forthcoming that, as in the case of our earth, the crust of the moon has been sculptured and modified both by the action of water and ice. Astronomers

will await with the greatest interest the publication of the further information which M. Loewy promises.

DO BEES RECOGNISE ONE ANOTHER?

The naturalist Albrecht Bethe finds, asthe result of a series of researches, that bees do not know individuals either by sight or smell. There would seem to be a something, called by Bethe a "nest material," by the help of which anything in the way of recognition is accomplished. Bees react in a friendly manner toward the "nest material" of their own colony, and in an unfriendly manner toward that of bees of other hives. Thus, in introducing a new queen into a queenless colony, it is necessary to protect her, or she is at once killed. But if the new queen is put into the queenless hive for a few days, protected by a gauze box, and then liberated, she is received. It would appear that at first the queen's "nest-material" calls out the fighting proclivities of the bees in the hive, but, time being given, the "nest materials" of both mix and cease to afford any adverse stimulus. This naturalist arranged an ingenious experiment which has thrown much light on the discussion. A hive was divided, half its grubs being given to a new hive. In a few days, when the young bees had come out, some were taken from the old hive to the new, and were treated as belonging to the new hive. For two or three weeks young bees could be thus transferred. But as soon as the brood of the new queen began to come out it was found that any one of these new bees introduced into the old hive would be killed, and bees from the old hive would likewise be attacked by the new brood in the new hive. Isolation for twenty-four hours of bees from the old hive ensured their friendly reception on introduction into the new hive. But when six weeks old even this precaution was insufficient. It seemed as though after this period the "nest material" from the new queen's neighbourhood had become strong enough to affect the whole hive.

HOW DO BEES FIND THEIR WAY?

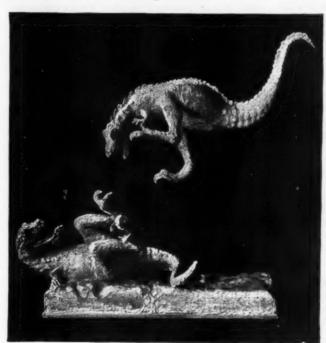
The manner in which bees find their way has recently been engaging the attention of the naturalist, A. Bethe. The insects cannot leave a material such as is left by ants on their paths, but it seemed possible that a volatile chemical substance might assist in guiding them, and it was for the purpose of obtaining further information on this point that Bethe carried on his investigation. If flying bees are guided by an emanation from the hive in all directions, then,

evidently, turning the hive through a quarter revolution ought to make no difference to them. Bethe finds, however, that the bees return to the spot where the entrance of the hive originally was.

To ascertain if memory pictures are instrumental in guiding bees, the appearance of a hive was altered, so that even a man would not have recognised either it or its surroundings. But so long as neither red nor white was used in this disguise, no effect was noticed in the behaviour of the bees, thus showing that no mental impression of the hive is retained. From these and other experiments it appears that some unknown force aids bees on their homeward journey, not of necessity guiding them to the hive but to the place where the entrance was when they left. This force does not operate for an immensely great distance, but is limited to an area the radius of which is about three miles. "Outside the radius" the bees apparently lose their way.

LEAPING LIZARDS.

The authorities of the American Museum of Natural History have been making a special study of how to attract the attention and intelligent interest of visitors



THE LEAPING DEINOSAUR

to the splendid collections which they have made on their spacious buildings in the Central Park, New York. Among other methods which they have adopted, the plan of showing, by means of plaster casts, all that is known of the structure and habits of the fossil monsters, whose remains have been unearthed in different parts of their continent, is especially worthy of notice. The accompanying illustration, reproduced from the last report of the Museum, shows such a cast from which, by a glance, it is possible to learn the habits and general build of one

type of Deinosaur, or "terrible big lizard," called Megalosaurus aquilunguis. The restoration is based upon the fragmentary skeletons in the Cope collection of extinct reptiles and upon the manner in which Professor Marsh restored an allied form. An examination of the skeleton shows it to be light, and partly traversed by air cavities. The length of the tail of the animal was eight feet, while from its snout to the base of the neck it measured about seven feet. From the very great disproportion in the lengths of the hind and fore limbs and the heavy, powerful tail, it is conjectured that its plan of progression was by a succession of leaps after the manner of the present day kangaroo. Probably, too, the heavy claws on the hind feet indicate that it attacked its enemies in a similar way to this animal.

There can be little doubt that in such particulars as the general proportions of the monsters—their lips, nostrils, and eyes, and the gape of their mouths, little error is likely to have been made in their restoration. It is when such points as the shape of the ears, the colour and nature of the skin, have to be decided that large demands are made upon the imaginative faculties of the artist. But since every effort is taken to ensure that the models are an exact

interpretation of the state of scientific knowledge of these beasts, it is certain that they will exert a truly educational influence upon visitors to the Museum.

FOOD FROM THE LABORATORY.

Newspaper references to the chemical manufacture of artificial foods have recently been very numerous. To understand the object which chemists have in view it is necessary to remember that before food can pass into the blood, and so afford nutriment to the body, it must be in a soluble state. Ordinarily, what are known as proteid materials, such as the lean of meat and the white of egg, which latter, men of science call albumen, are acted upon in the stomach by a peculiar ferment called pepsin, which converts the insoluble proteid into soluble pepton. This pepton can be easily absorbed by the blood. If an artificial pepton could be readily prepared, it will be evident that not only would the digestive organs be saved much work, but the nutrition of the body would be effected more easily, and, what is nearly as important, more cheaply. Though up to the time of writing

this has not been accomplished, the experiments of Dr. J. W. Pickering and Professor Halliburton in this country, and of Dr. Lilienfeld on the continent, are bringing us within reasonable distance of the time when an artificial pepton will be procurable with little trouble and at small expense. Reports have lately been circulated that Dr. Lilienfeld has actually succeeded in manufacturing such an artificial food, but the wish has been father to the thought, for he has only carried the process a step forward.

R. A. GREGORY.



The German Reichstag, consisting of The New 397 members, is apparently a much Reichstag. more mixed body than our House of Commons. The recently erected Reichstag is probably more heterogeneous than any of its predecessors. In the House of Commons there are only four welldefined parties, Conservatives, Liberal Unionists, Opposition Liberals, and Irish Home Rulers; in the Reichstag there are sixteen parties, each of them hating the other with a rancour unknown in English politics. The 397 members among them represent 97 distinct callings or professions, including 12 justices, 13 mayors, 21 large manufacturers, 22 clergymen (most of these members of the "centre" or Roman Catholic party), 112 landowners, 111 lawyers, 28 military and naval officers, 15 editors, and 25 authors. The majority of the editors and authors belong to the social democratic party. The religious census of the new Reichstag likewise presents features of interest. There are 141 Roman Catholics, 1 member of the old Catholic church, 177 Reformed Lutherans, 29 old Lutherans, 4 Jews (belonging to the social democratic party), 7 Freethinkers (also social democrats), 30 without any profession of faith, of whom 29 are Socialists, and 4 unknown. The oldest member of the House is 88 years old, the youngest 27.

The government of the Tsar intend Insurance of shortly to deal with the vast question of Workmen in workmen's insurance in the Russian Empire. M. Yermoloff, the Minister of Agriculture, is preparing a series of enactments covering the whole ground of the mining industry. He has sent several of his subordinates to Germany and Austria with the object of studying the regulations in force in these countries. It was M. Yermoloff's original intention to extend the benefits of the proposed new laws to agricultural labourers, but the opposition of the large landowners, and the extreme difficulty of obtaining reliable statistics, have led to the abandonment of the idea to include these. For the present, therefore, a beginning will be made with the miners, to be followed, if the experiment prove successful, by the extension of the regulations to workmen in factories.

Germany is far ahead of any other Electric European country in the number and Railways in Europe. mileage of its electrical railways. In the whole of Europe there are a little over 1,500 miles of railway where the motive power is electricity. Of this total Germany possesses 750 miles. France comes next with 270 miles. The British Isles have only a little over 100 miles, being ahead of Switzerland by about 8 miles. In the whole of Russia only 20 miles of electric railway are open, although in a few years Russia will come next to Germany, as several important concessions have been granted to foreign syndicates for building electric lines in the principal cities of the Empire.

There is no more mysterious fish in The Mysterious the ocean than the sardine, not one whose manners and customs-if one may so speak of a fish-are less understood by naturalists and others to whom the subject is of peculiar interest. There has been a great strike of sardine fishermen on the coast of Brittany this summer, and much suffering has ensued among a class of people whose improvidence is well known. Nobody without special knowledge of the fishery and the industry, which consists of preserving the sardines in oil, would suspect that the abundance of the fish has been the cause of the crisis. This is nevertheless the explanation. The factories were soon fully stocked, and then the prices offered for the sardines were such that the men preferred to take them out to sea again and throw them overboard rather than sell. Some years ago the same fishing people were plunged into deep distress because the sardine appeared to have nearly forsaken the Brittany coast. The dearth continued with more or less severity for several years, but the fish was plentiful enough off the coast of Portugal, and not a few of the speculators emigrated to the more favoured region. But the sardines have since returned to their former summer haunts, and this year in such vast numbers that the sea sometimes seems alive with them. Nature offers to man food without stint, and man replies that it is not worth his while to accept it.

Where the sardines go at the approach of winter nobody knows, but it is conjectured that they make very long voyages to warmer regions. Still more mysterious is their apparent capriciousness in the choice of summer quarters. Assuming that they can forecast the weather and the temperature of the water, we have probably here the explanation. But can they? It may be that they are driven from certain waters by the extraordinary number of their enemies, of whom the most formidable and persistent are not men but porpoises.

British housekeepers are hardly likely Domestic to approve very heartily a recent new Canada. departure made by the Department of the Interior at Ottawa. For many years past Canada, unlike some of the Australasian Colonies, has not granted assisted passages to immigrants. In 1898, however, the Department of the Interior, which has charge of immigration, partially reverted to the policy of former days, and established a system under which the fares of women servants are prepaid. Moreover, when the system of assisted passages was thus revived, the Department sent a woman agent to Great Britain to stimulate the immigration of women servants to Canada. Women servants are undoubtedly in demand in Canada, as they are in the United States; but it is questionable whether good servants are in greater demand in the Dominion than they are in

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England, and without wishing to say one word to the disparagement of Canada, or of Canadian life, it is also questionable whether the wage prospects of women servants in Canada are much better than they are in the large cities of England. During 1897, according to the statements of the Dominion Immigration agents at Montreal, wages for women servants ranged from \$6 to \$10 a month. Wages are higher in the United States than in Canada, and in view of this fact the policy of the Immigration Department in prepaying passages is open to question; for it will be impossible for the Department to keep immigrant servants in Montreal or Toronto, if they wish to seek their fortunes in New York or Boston. The servant problem is admittedly great in Canadian cities; but it is only one of many problems which Canada has to face from its close proximity to the country of seventy million people, and of hundreds of great cities, immediately to the south of it. Boston and many of the cities in New England depend to a considerable degree for women servants on the immigration from the maritime provinces of Canada, and hundreds of servants in these cities come from British American territory as far distant as Newfoundland. Although wages are lower in Canada than in the United States, and not much higher than in England, the social position of domestic servants outside of the large cities is much pleasanter in Canada than either in England or in the United States.

Varieties.

Buy only safety matches-that is the The Remedy for " Phossy remedy for phossy jaw. The public have Jaw. this remedy in their own hands, for if they only bought safety matches, only safeties would By safety matches, of course, we mean be made. matches that will strike only on the box. There is no yellow or poisonous phosphorus used in making these, and consequently there is no harm to the workers in their manufacture. Prepared friction surfaces can be obtained in any number, so that a "striking slip" on a favourite box or case can be frequently renewed. There is really no inconvenience in using such matches; it is merely a matter of habit, and the public may surely be pressed to change their habit to prevent the horrible necrosis of the jaw to the match makers.

In fact, it is a question if the public, who will insist on purchasing ordinary matches that will strike anywhere, are not as much to blame for this disease as are manufacturers, who do their best by ventilating their works to prevent it. But if a certain section of the public will compel manufacturers to use yellow phosphorus by insisting on the purchase of ordinary matches, and if manufacturers are not strong enough, or united enough, to combine in resisting this demand, what objection

could there be to a short Act of Parliament prohibiting the use of yellow phosphorus altogether? The result would be that only "safeties" would be made, and in six months the ingenuity of manufacturers and the common sense of the public would so have adapted themselves to the new order that they would wonder why the Act had not been passed before. It is not a question of "No 'phossy jaw,' no matches"; it is really a question of the universal use of an improved match which is harmless to the makers, but which some of the public think inconvenient to use.

It is of little avail to think of the matches in vogue at an earlier date. They were not inappropriately called lucifers, were constantly causing accidents, and were very sulphurous.

The credit of first inventing a friction match is said to be due to Mr. John Walker, a druggist of Stocktonon-Tees, in 1827, and anyone walking up the broad High Street of that flourishing town—a street so broad that it looks like a large market square, with its quaint Dutch-like Town Hall in the centre—may suddenly come upon a brass plate on one of the houses, fixed there as a memorial to him. Being a druggist, he was probably aware of the fact that chlorate of potash when mixed with certain other chemicals is liable to explode

when friction or percussion is applied. He tipped wooden splints with a composition of chlorate of potash, sulphide of antimony, and glue, the splints having been previously covered with sulphur. They were ignited by hard friction on glass- or sand-paper, and were called "Congreves," in honour of Sir William Congreve, the inventor of the Congreve rocket, and used to be sold in boxes of about fifty for a shilling, or even more. Six years later, in 1833, and almost simultaneously at different places, a phosphorus friction match was made. About twenty years later the patent safety match was introduced. It was so called to distinguish it from the old lucifers, which were a constant source of danger, as kindling sparks often flew off from them when they were struck. The daily papers of those times, and also coroners' courts, bore grim testimony to the accidents frequently occurring. The safety match caused much speculation at the time (1854), but it was found serviceable, and the public have appreciated it. Its origin is somewhat obscure, but it appears to have been introduced by a Swede named Lundberg and Mr. William Bryant, who was then a maker of lucifer matches at Plymouth. Whether it was a joint invention, or whether Mr. Bryant purchased the idea from Lundberg, we cannot say. The "tipping" mixture for these matches is said to be much the same as the old "Congreves" (without the sulphur on the splints), viz. chlorate of potash, sulphide of antimony, and glue, but the harmless red or amorphous phosphorus forms an important constituent of the composition on the friction surface of the box. So far, then, the best form of safety match, or, as it is sometimes called, Swedish match, seems the latest word of science on the subject, and it appears as safe for the public to use as it is harmless for the makers to produce.-F. M. H.

Errant. As at present used, this word represents two different notions. One of these is "straying, wandering," in which sense it was formerly applied to the planets, or wandering stars. The other is "journeying, on one's travels"; this is now found in knight errant, but was formerly applied like wandering in The Wandering Jew, and to justices on circuit.

It seems a long time ago since people Travelling by travelled by canal, and yet one can remember voyaging from Paddington to Camden Town by fly-boat in the sixties. This was however a revival, and not a profitable one, for packet boats had plied regularly between l'addington and Uxbridge as long ago as 1801, and troops had even been sent all the way by canal from London to Liverpool. On the Bridgwater canal, between Runcorn and Manchester, there was a regular passenger service for sixty years. On the Kennet and Avon canal there was another long-established service between Bath and Trowbridge in thin sheet-iron boats, known as Scotch boats. Iron boats were also used for passengers between Carlisle and Port Carlisle, this being an express service, the average speed being ten miles an hour. On the Glasgow and Paisley canal the passenger express boats used to run at nine miles an hour, and the fare was a shilling for the eleven miles between Glasgow and Johnstone. In the three summer months of 1833 these boats carried 80,000 passengers. On the Forth and Clyde canal the passenger boats used to run the fifty-seven miles in eleven hours, and the fare at one time was as low as fourteen pence for the whole distance. It was on this canal that Miller and Lymington's steamboat, built at Carron, was launched in November 1789, and knocked off the floats of her paddles at the sixteenth lock; and here on March 1802 the Charlotte Dundas put in her first appearance, towing two laden barges of seventy tons each, to the amazement of the gazing hundreds.

Among my books is a leather-bound A Curious four-volume edition of Pope's "Iliad," which has the following imprint: "London: Printed for A. Horace, P. Virgil, and T. Cicero, in Paternoster Row; J. Milton in St. Paul's Churchyard; D. Plato and A. Pope in the Strand, MDCCLIX." And in the same size and binding I have a four-volume edition of the Odyssey with a similar imprint, the date being 1760. As it is extremely unlikely that such a combination of namesakes of famous personages should have occurred either in the Row or the Strand. I should be glad to know what it all means. As Pope died in 1744 he evidently had no hand in this "ponderosity of facetiousness," as Dr. Johnson would have called it .- J. G.

At a public meeting the other day, A Reminder from Colewhen a tempestuous Progressive was cn full steam ahead, there occurred to us a remark of Coleridge's, which is worth thinking over. "For myself," he said, "I would far rather see the English people at large believe somewhat too much than merely just enough, if the latter is to be produced, or must be accompanied, by a contempt or neglect of the faith and intellect of their forefathers. For not to say what yet is most certain, that people cannot believe just enough, there are errors which no wise man will treat with rudeness, while there is a probability that they may be the refraction of some great truth as yet below the horizon."-J. G.

Cooking by gas has now become so Fact or Fancy? general that we are inclined to smile when we hear people talking of how they can detect gas-cooked meat at once, how they can smell the gas in it, etc. etc.; and the wary diner-out now carefully avoids the subject, whatever he may think, owing to his having been so frequently caught napping in assuming that there was no gas stove on the premises. It is curious that exactly the same state of affairs occurred at the introduction of coal. There is a passage in old Stow, the chronicler, to the effect that the fine city ladies of his day would not come into any house or room where coals were burned, nor willingly eat of the meat that was either boiled or roasted with a coal fire. Even John Locke-" on the Understanding "-gave as his excuse for not staying in London that the smoke from the coal fires affected his asthma so much! The same notion is not yet extinct in Italy, where coal is still mostly looked on as only fit for raising steam. Recently a Scottish family resident there secured a few tons for domestic purposes, with the result that their visitors at once began to leave them alone; the Italian ladies, when they called, either giving the fire as wide a berth as possible, or beating a hasty retreat, complaining of headache, which they attributed to the burning of the carbone fossile!—J. G.

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Earnest. We say a person is in earnest when he "means business," and we say also that the primrose is an earnest of the spring. There is no connection between these two uses of the word. In the first case it represents an old English word, which also meant "ardour in battle." In the second case it represents an old word, erres or arles, which is perhaps of French origin.

Astronomical
Notes for
October.

Astronomical
Notes for
October.

As 5h. 3m. in the morning, and sets
at 5h. 3m. in the evening; on the 11th
he rises at 6h. 18m., and sets at 5h. 14m.; and on the
21st he rises at 6h. 36m. and sets at 4h. 53m. The
Moon enters her Last Quarter at 6h. 5m. on the
evening of the 7th, becomes New at 37m. past noon

on the 15th, enters her First Quarter at 9h. 9m. on the morning of the 22nd, and becomes Full at 18m. past noon on the 29th. She will be in apogee, or farthest from the earth, about 5 o'clock on the evening of the 7th, and in perigee, or nearest us, about half-past 1 o'clock on the morning of the 20th. No eclipses or special phenomena of importance are due this month. The planet Mercury will not be visible, and will arrive at superior conjunction with the Sun on the 19th. Venus attains her greatest brilliancy as an evening star on the 27th; she passes during the month from the constellation Libra into Scorpio, and will be in conjunction with the crescent moon on the 18th. Mars rises now before midnight in the constellation Gemini, moving in the course of the month into Cancer, and continues to increase in apparent brightness. Jupiter will be in conjunction with the Sun on the 13th, but may become visible a little before sunrise at the end of the month, in the constellation Saturn may be seen for a short time after Virgo. sunset in the south-west, situated in Scorpio; he will be in conjunction with the crescent moon on the 18th, about three hours after Venus, and therefore to the east of her.-W. T. LYNN.

The Fireside Club.

ANSWERS IN SECOND SERIES OF SHAKESPEARIAN ACROSTICS.

I. (page 407.)

- I. SIWARD . . Macbeth, Act Five, Scene Eight.
- 2. OTHELLO . Othello, Act One, Scene Three.
- 3. LEPIDUS. . Julius Cæsar, Act Four, Scene One.
- 4. DOUGLAS . Hen. IV., Pt. 1, Act Three, Scene Two.
- 5. IAGO . . Othello, Act One, Scene Two.
- 6. EDWARD . Hen. VI., Pt. 3, Act Five, Scene Seven.
- 7. RICHMOND. Richard III., Act Five, Scene Four.
- WHOLE. SOLDIER, Coriolanus, Act One, Scene Four.

II. (p. 475.)

- 1. CONDITION. Henry V., Act Four, Scene One.
- 2. ROYAL . . Lear, Act Four, Scene Six.
- 3. ONCE. . . Richard II., Act Three, Scene Two.
- 4. WOFUL . . Hen. VI., Pt. 3, Act Two, Scene Five.
- NATURE . Hen. VI., Pt. 3, Act Four, Scene Six. WHOLE. CROWN, Hen. VI., Pt. 3, Act Three, Scene One.

III. (p. 544.)

- I. TRUE. . . Midsummer Night's Dream, Act Five, Scene One.
- 2. RESOLUTION Antony and Cleopatra, Act Four, Scene Thirteen

- 3. UPRIGHT . Richard II., Act One, Scene One.
- 4. TRUST . . All's Well that Ends Well, Act One, Scene One.
- 5. HONOURS . Henry VIII, Act Four, Scene Two.

WHOLE TRUTH, Hen. VI., Pt. 2, Act Three, Scene One.

IV. (p. 611.)

- 1. PERDITA. . Winter's Tale, Act Four, Scene Three.
- ROSALIND . As You Like It, Act Three, Scene Two.
- 3. IMOGEN . . Cymbeline, Act Three, Scene Six.
- 4. NELL. . . Hen. VI., Pt. 2, Act One, Scene Two.
- 5. CORDELIA . Lear, Act Four, Scene Seven.
- 6. ELIZABETH. Richard III., Act Four, Scene Four.
- SILVIA . . Two Gentlemen, &c., Act Four, Scene Two.
- 8. Shrew . . Taming of the Shrew, Act One, Scene Two.

WHOLE. PRINCESS, Cymbeline, Act Five, Scene Five.

V. (p. 679.)

MOTLEY. As You Like It, Act Two, Scene Seven. "Invest me in my motley, give me leave to speak my mind, and I will through and through, cleanse the foul body of the infected world."

EGYPTIAN. Othello, Act Three, Scene Four. "That handkerchief did an Egyptian to my mother give. She was a charmer, and could almost read the thoughts of people." REVENGE. Othello, Act Five, Scene Two. "Not Cassio killed? then murder's out of tune, And sweet revenge grows harsh."

IRELAND. Macbeth, Act Two, Scene Three. "To Ireland I, Our separated fortune, shall keep us both

he safer."

TEARS. Lear, Act Three, Scene Six. "My tears begin to take his part so much, They'll mar my counterfeiting."

WHOLE. MERIT, Hamlet, Act Three, Scene One. "The spurns, That patient merit of the unworthy

takes."

There has scarcely been a point of difference between most of the competitors in this Second Series, until the Fifth Acrostic, which has been perfectly solved by only one competitor, M. Moody, Buncrana, co. Donegal, Ireland, to whom therefore goes the prize of Two Guineas. Many of the lights offered in the Fifth Acrostic were remarkably ingenious, Mind, Egypt, Three, etc., but none sufficiently answered what was required to be admissible as alternatives.

AUGUST ANSWERS.

(p. 679.)

PRIZE BOUT RIMÉ VERSES.

Shackled by his infirmities man cannot be His own ideal; Would he see The heights above him? His weak, dazzled eye Turns, baffled, downwards from the gleaming sky. He longs for clouds, for shadows, for the night, Knowing that far more glorious is light If he could bear it. He looks out for rest, For recreation, knowing work is best Could he work on, unwearied. Not his will But life's uncertainties beset him still, Crowding too much into one little day, Pushed back by forces that he cannot stay. And yet the heights Man has attained to never, Man as he is to be, may gain for ever!

M. A. GIBSON, Ivy Lodge, Saffron Walden.

PRIZE GEOGRAPHICAL ACROSTIC. SPAIN.

From Seville come the globes of gold To many a foreign land,
The nation mourns her power of old 'Neath Pedro's kingly hand. '
Alhambra's treasures fade from mind Absorbed in warfare keen
On shores the voyager sailed to find For Isabel the Queen.
Nevada lifts a range snow-crowned,
Above the fragrant plain,
Where vine and olive-yards abound And breathe the clime of Spain.

E. E. DUNNETT, South Lawn, Tunbridge Wells.

TEA-TABLE TOPICS.—The prize of FIVE SHILLINGS goes to C. Larter, Combemartin, Ilfracombe.

TEA-TABLE TOPICS.

Seeing is Believing. That the art of advertisement is no new thing is amusingly proved by an old menagerie poster, dated January 1, 1789, preserved among the archives of the city of Exeter. Of the tiger the showman declares, "This magnanimous animal needs no other recommendation than to behold him." The porcupine is described as "covered with spiny quills, which, when attacked, he discharges one by one at his pursuers." The exhibitor's ideas of geography are as peculiar, for he speaks of another animal as coming from "the River La Platte, near Cape Horn."—EXONIENSIS.

Little Commentators. We do not realise how strangely children sometimes interpret the Sacred Narrative. A little girl, listening with wonder to the wanderings of the Children of Israel, at last exclaimed, "But mother, they were only children, and children could never do all that!" A German child, hearing the history of Eli, grew very unhappy as the story went on. At length he asked anxiously, "Was it really only for spoiling his children that Eli was punished?" When told that it was so, he exclaimed, with evident apprehension, "Don't you sometimes say that mother spoils us?"—SPEEDWELL.

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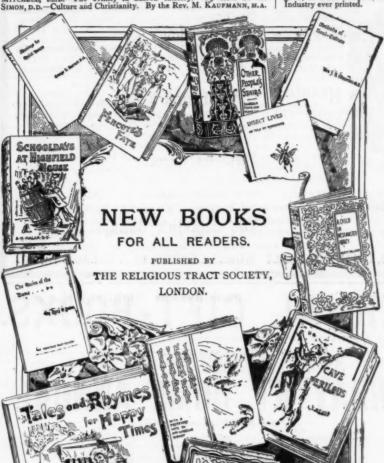
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